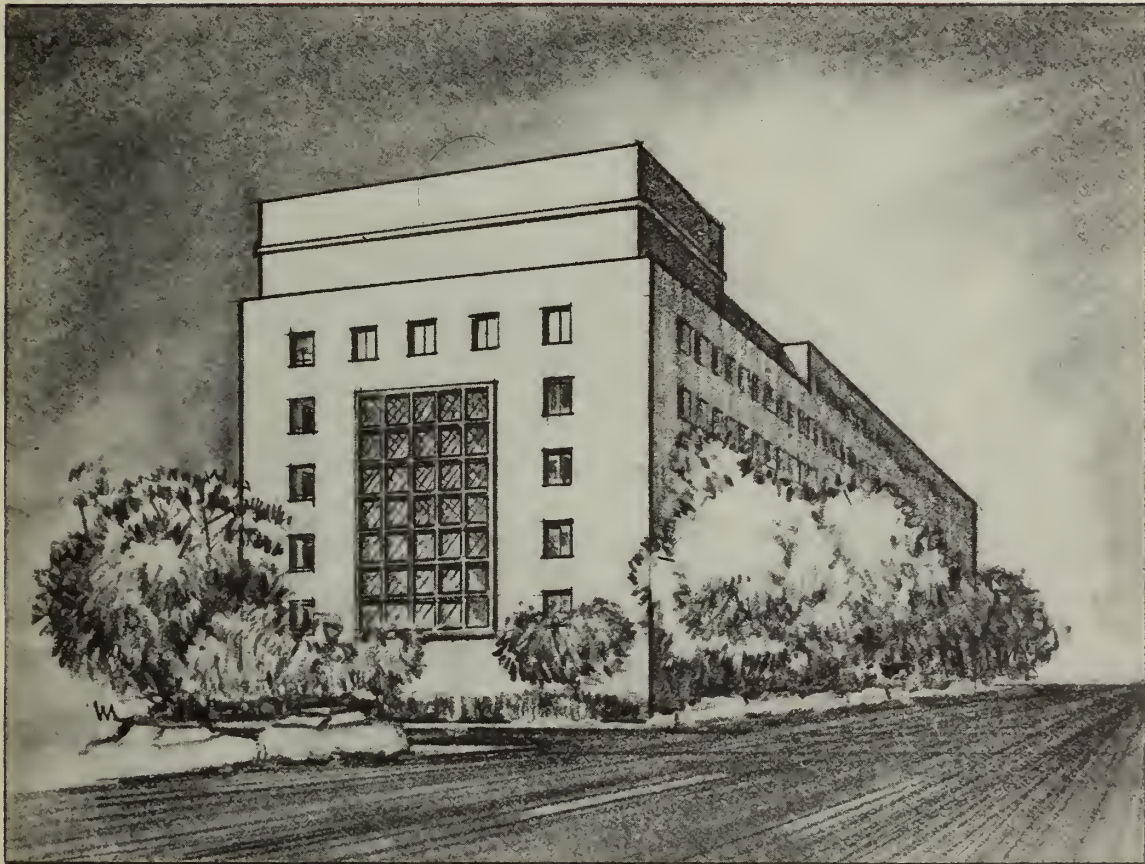


**HALL OF JUSTICE**

**CONDITION ASSESSMENT**



**BUREAU OF ENGINEERING**  
**BUREAU OF ARCHITECTURE**  
**DEPARTMENT OF PUBLIC WORKS**

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August 18, 1987

Hall of Justice  
Condition Assessment  
Report

Lt. Michael E. LaVigne  
Capital Project Manager  
Sheriff's Office  
Room 333, City Hall  
San Francisco, CA 94102

Dear Lt. LaVigne:

I am pleased to transmit to you the Hall of Justice Condition Assessment Report. It addresses both the existing facilities and the alternatives for expansion. There is also a section highlighting the priorities of the different categories of work to be done.

On behalf of my staff and the Bureau of Architecture, I wish to thank you and the Sheriff Department for entrusting us with this important task. Hope you will find this assessment report useful for your purpose.

Looking forward to serving you in future projects.

Very truly yours,

A handwritten signature in cursive script, reading "Raymond Wong".

Raymond Wong  
Division Engineer  
General Engineer  
Services

Enclosure: Condition Assessment Report

cc: Vitaly B. Troyan  
Norman Karasick  
Calvin Malone



HALL OF JUSTICE  
CONDITION ASSESSMENT  
AND  
EXPANSION STUDY

BUREAU OF ENGINEERING  
BUREAU OF ARCHITECTURE  
DEPARTMENT OF PUBLIC WORKS

CITY AND COUNTY OF SAN FRANCISCO

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## EXECUTIVE SUMMARY

The Hall of Justice is a 7-story reinforced concrete structure located between Bryant and Harrison, 6th and 7th Streets. Adjacent to the structure is a two-level parking garage with approximately 35,000 square feet on each level.

The Hall of Justice was constructed in 1958. It houses various offices and facilities of the Sheriff and Police Departments, and of the District Attorney. It is also the site of several Municipal Courts and the Coroner's Office. County Jails No. 1 and No. 2 are located on the 6th and 7th floors.

The Hall of Justice is almost 30 years old. Deterioration through age and usage, insufficiency of meeting the requirements of today's Building Code, and increased occupancy by office personnel and prison inmates have rendered many components of this building functionally inadequate.

Structurally, the existing building is in good condition. It requires no seismic upgrading or other improvements, except to fill some superficial cracks. The structure is estimated to have another 50 years of remaining life.

The Condition Assessment Report consists of two parts: Part I addresses existing facilities; Part II presents expansion alternatives.

Part I is further subdivided into four sections:

1. Deficiencies: Those facilities which are not functioning properly due to inadequate capacity or lack of repairs, or not meeting the requirements of present-day codes. The recommended courses of action are generally replacement or overhaul.
2. Improvements: Those facilities which are in need of upgrading. The recommended courses of action include redesign, renovation, modification, addition, and replacement.
3. Systems investigated and functioning satisfactorily. Therefore, no work is required.
4. Project Priorities: The Projects are categorized into three priority orders: life safety; critical; and operational inadequacies.

Part II offers three proposals for expansion:

1. Addition to Coroner's wing.
2. New building over parking garage.
3. New building on adjacent property.

For Part I, each item is described by discipline: Architectural, Structural, Mechanical, and Electrical. Following each description are explanation and justification for the need of such work; ways and means of achieving the objectives; and finally, the estimated cost which includes design, construction, and construction management.

If all the deficiencies where identified are corrected, and all improvements as recommended are made, the existing facilities of the Hall of Justice will be able to serve its present purposes for many years to come.

The following is a summary of the estimated total project cost, rounded off to the nearest thousand dollars.

| IMPROVE, UPGRADE, RENOVATE, REPAIR<br>EXISTING FACILITIES |                             |                     |                                    |                     |
|---|-----------------------------|---------------------|------------------------------------|---------------------|
| <u>Discipline</u>   | <u>Planning,<br/>Design</u> | <u>Construction</u> | <u>Construction<br/>Management</u> | <u>Total</u>        |
| Architectural   | \$267,000                   | \$3,296,000         | \$153,000                          | \$3,716,000         |
| Structural  | - -                         | 1,000               | - -                                | 1,000               |
| Mechanical  | 543,000                     | 4,613,000           | 383,000                            | 5,539,000           |
| Electrical  | 93,000                      | 725,000             | 81,000                             | 899,000             |
| Total Project Cost:                                       |                             |                     |                                    | <u>\$10,155,000</u> |

By priority, the estimated costs are as follows:

|                           |                     |
|---------------------------|---------------------|
| Life Safety:              | \$4,400,000         |
| Critical:                 | 1,412,000           |
| Operational Inadequacies: | 4,343,000           |
| Total:                    | <u>\$10,155,000</u> |

With respect to the expansion alternatives, each of the three proposals describes the office and prison occupancy separately, with analyses on area, occupant loads, parking, code compliance, disruption of existing facilities, and miscellaneous factors.

The following are the estimate costs:

| <u>Proposal</u>                                  | <u>Design</u> | <u>Construction</u> | Demolition<br>and<br><u>Remodeling</u> | <u>Inspection</u> | <u>Total</u> |
|--|---------------|---------------------|--|-------------------|--------------|
| No. 1<br>Addition to<br>Coroner's<br>Wing        | \$3,253,000   | \$43,361,000        | \$10,510,000                           | \$1,626,000       | \$58,750,000 |
| No. 2<br>New Building<br>Over Parking<br>Garage  | 5,004,000     | 64,200,000          | 19,049,000                             | 2,090,000         | 90,343,000   |
| No. 3<br>New Building<br>on Adjacent<br>Property | 7,882,000     | 86,714,000          | 18,378,000                             | 3,940,000         | 116,914,000  |

## INTRODUCTION

The Hall of Justice Condition Assessment is a feasibility study of both improving the existing facilities and expansion. The report was prepared at the request of the Sheriff Department as a basis of comparison of the cost of the various approaches, all for the purpose of solving the many problems the Hall of Justice is facing, such as deficiencies, antiquity, and over-crowdedness.

This report is the result of many months of on-site inspection, research and study by a team of professional engineers and architects of the Department of Public Works.

2. EXISTING FACILITIES

2.1 DEFICIENCIES REQUIRING CORRECTION

2.1.A Architectural

2.1.S Structural

2.1.M Mechanical

2.1.E Electrical



## 2.1.A ARCHITECTURAL DEFICIENCIES

### Introduction

The Hall of Justice appears to be in excellent condition. The deficiencies in the systems that are noted in the following section have been generally caused by either their having reached, or being close to reaching, the end of their expected service life, or they are the results of the failure or obsolescence of the building equipment.

When the deficiencies are corrected the building will be weather tight and serviceable with enhanced life-safety for the occupants.

## 2.1.A.1

DELETE DOUBLE DEADBOLT LOCKS AT JAIL CELLSA. Description:

Replace 16 existing double deadbolt locks with new locks that will snap closed.

B. Explanation/Justification:

The majority of the cell locks in the facility are deadbolt locks requiring a key for both locking and unlocking functions. The situation impedes quick entry into, or quick exit out of, the cells and cell blocks and could become critical in an emergency situation. Currently there are 16 cell doors that, for no apparent reason, have two deadbolts on them. This project would remove the 32 existing locks and replace them with snaplocks that will lock when closed, thus enhancing the safety of inmates and staff.

c. Cost:

|              |          |
|--------------|----------|
| Design       | 2,500    |
| Construction | 12,500   |
| Inspection   | 1,000    |
| <hr/>        |          |
| TOTAL        | \$16,000 |



2.1.A.2      SALLYPORT AT STAIR NO. 4

A.    Description:

Divide existing 6th floor landing at stair #4 with a steel bar security partition and gate system, complete with the required manual and/or electronic exit devices.

B.    Explanation/Justification:

Stair #4 does not have a sallyport between the stair and the jail; any person could come up the stairs from areas below and access jail facilities by jimmying one door, or slip items under the door to inmates in the jail.

By erecting a security sallyport on the landing, direct access to the door to the jail will be prevented. Video surveillance of this sallyport is included in this report under item 2A.1-Automatic Doors and Gates.

C.    Cost:

|              |                 |
|--------------|-----------------|
| Design       | 5,500           |
| Construction | 40,000          |
| Inspection   | 1,500           |
| <u>TOTAL</u> | <u>\$47,000</u> |

## 2.1.A.3

CHANGE DEADBOLT LOCKS TO SNAP LOCKSA. Description:

Replace existing deadbolt locks on the cell blocks, dayrooms and high-security cells with locks that will automatically lock when the doors are closed. An estimated 115 doors would be converted.

B. Explanation/Justification

The existing deadbolts, in most cases, have to be locked and unlocked with keys. In the event of panic or a concerted effort by inmates to escape, the physical necessity of using a key, and the attendant time delay, may become a critical factor.

C. Cost:

|              |          |
|--------------|----------|
| Design       | 3,500    |
| Construction | 93,000   |
| Inspection   | 2,000    |
| <hr/>        |          |
| TOTAL        | \$98,500 |

## 2.1.A.4

KITCHEN FLOOR REPLACEMENTA. Description:

Replace existing kitchen floor with new seamless floor and base material system.

B. Explanation/Justification:

The floor of the kitchen on the 7th floor is leaking into an area on the 6th floor that has been converted to housing. The project would include the removal of the existing flooring system down to the concrete slab and the installation of a new waterproof flooring system. The project would require approximately 4 weeks of down time for the kitchen. The cost does not include alternate means of providing meals during the construction period.

C. Cost:

|              |                 |
|--------------|-----------------|
| Design       | 6,000           |
| Construction | 74,000          |
| Inspection   | 3,000           |
| <u>TOTAL</u> | <u>\$83,000</u> |

## 2.1.A.5

EXTERIOR WINDOWSA. Description:

Replace existing perimeter vinyl gasket system around window on all original facades.

B. Explanation/Justification:

There are approximately 640 windows on the Hall of Justice. Of this number, 28 windows are on the Coroner's Wing Addition and therefore new enough that no problems are anticipated during the next twenty years.

The remaining 612 windows are in good condition, with the exception of the perimeter vinyl gasket between the window frame and the exterior cladding. This gasket has apparently shrunk - leaving a gap of 1/16 ( $\pm$ ) inch. There is water damage evident on the building interior around some of the windows. Please refer to Item 1A.10 for related work.

C. Cost:

|              |               |
|--------------|---------------|
| Design       | 5,300         |
| Construction | 89,300        |
| Inspection   | 2,400         |
| <u>TOTAL</u> | <u>97,000</u> |

2.1.A.6      MAINTENANCE OF EXISTING DOORS AND GATES

A.    Description:

Service and adjust existing locking devices for single doors as well as gang-operated door hardware.

B.    Explanation/Justification:

This work item would have to be performed only if no funding were available for the automation project for the doors and gates (See Item 2.A.1).

Project would involve the servicing of locks on each cell or cell block in both the mens' and women's facilities and would include the removal of lock covers, cleaning, adjustment, lubrication and replacement of any broken or worn-out parts. The service should be performed on a system-wide basis every 3-5 years.

C.    Cost:

|              |          |
|--------------|----------|
| Design       | 2,500    |
| Construction | 16,000   |
| Inspection   | 1,500    |
| <hr/>        |          |
| TOTAL        | \$20,000 |

## 2.1.A.7

RENOVATE EXISTING ELEVATORSA. Description:

Modernize the main bank of 4 passenger elevators at the Main Lobby by introducing a computerized control system and renovating the cab interiors.

B. Explanation/Justification:

The existing elevators are nearly 30 years old as reflected in the current level of service; they are slow and worn. The proposed computer controls will make the elevators "smart", as the computer would constantly monitor all conditions and adjust operations accordingly. An increase in operating efficiency of 15%-20% could be expected.

C. Cost:

|              |           |
|--------------|-----------|
| Design       | 14,000    |
| Construction | 180,000   |
| Inspection   | 6,000     |
| <hr/>        |           |
| TOTAL        | \$200,000 |



2.1.A.8      ELEVATOR 9 SHAFT REPAIR

A.    Description

Provide a louvered opening to the exterior in the shaft of elevator #9.

B.    Explanation/Justification

There is an existing condition that occasionally prevents the opening and closing of the elevator doors on the 6th floor. By installing a larger opening for outside air at the penthouse, this condition will be corrected.

C.    Cost:

|              |               |
|--------------|---------------|
| Design       | 2,500         |
| Construction | 15,500        |
| Inspection   | 1,500         |
| <u>TOTAL</u> | <u>19,500</u> |



## 2.1.A.9

WINDOW SCREENSA. Description:

Provide fixed security window screens for all windows on the 6th and 7th floor that do not currently have screens. Repair, clean and lubricate operating mechanisms for all windows.

B. Explanation/Justification:

The windows on the floors housing inmates are jalousie windows that need to be open much of the time to enhance the operation of the HVAC systems. The open windows, however, provide an opportunity for inmates to receive contraband goods by dropping lines to the ground or lower roof levels. This can be prevented by providing fixed stainless steel screens on the windows.

The mechanisms that operate the windows are difficult to operate, or are inoperable, in many cases. They must be refurbished.

C. Cost:

|              |                 |
|--------------|-----------------|
| Design       | 7,000           |
| Construction | 174,000         |
| Inspection   | 3,000           |
| <hr/> TOTAL  | <hr/> \$184,000 |

2.1.A.10     EXTERIOR CLADDING

A.     Explanation:

Clean the exterior of the building, recaulk the joints in the cladding, coat the base of the building with a clear sealant to prevent absorption of ground water and repair minor cracks in the cladding at one location.

B.     Justification:

The building appears dirty on the upper portions of the south facade with black stains along the horizontal joints of the granite cladding. Presumably the sealant has aged and lost its bond allowing moisture to collect and mold to grow. Along the base of the building there are brown semi-circular stains due to contact of the cladding with the ground. These stains should be cleaned, the soil should be excavated to the base of the granite panels and a clear waterproofing compound should be applied to the entire base course around the building. The lower portions of the building adjacent to auto traffic areas are stained with dirt and should also be coated with sealer after cleaning to expedite future maintenance.

Two cracks were found in the granite cladding at the head of an opening at the ground floor on the west facade. These pieces should be replaced or repaired to prevent moisture migration into the building.

It is recommended that this work item be combined with Item Number 1A.5, exterior windows, to make the most efficient use of scaffolding required for each project.

C.     Cost:

|              |           |
|--------------|-----------|
| Design       | 10,500    |
| Construction | 267,000   |
| Inspection   | 5,500     |
| <hr/>        |           |
| TOTAL        | \$283,000 |

2.1.A.11      ROOF REPLACEMENT

A.    Description:

Replace existing built-up roof on the original structure.

B.    Explanation/Justification

The existing built-up roof is nearly 30 years old and cannot be expected to perform for much longer. Project to include removal of existing roofing system and replacement of same.

C.    Cost:

|              |           |
|--------------|-----------|
| Design       | 22,000    |
| Construction | 372,000   |
| Inspection   | 8,000     |
| <hr/>        |           |
| TOTAL        | \$402,000 |

#### 2.1.S DEFICIENCIES - STRUCTURAL

A visual inspection of the building revealed no major structural deficiencies. There is no evidence of overstressing or corrosion of the structural elements. Minor cracking in the walls and slabs was noted; however, this is not uncommon in a building of this type and does not warrant any repair at present. One defining which should be repaired is noted in this report.

2.1.S.1

REPAIR VERTICAL CRACK IN THE WALL

A. Description:

The vertical crack is located along a wall in the northeast corner of the building. The repair will consist of preparing the existing crack surface and then filling it with a mastic material.

B. Explanation/Justification:

The crack in the wall is unsightly and should be filled in.

C. Cost:

|       |         |
|-------|---------|
| TOTAL | \$1,000 |
|-------|---------|

#### 2.1.M DEFICIENCIES REQUIRING CORRECTION - MECHANICAL

Investigations of the mechanical systems resulted in the identification of nineteen (19) system deficiencies requiring correction. Work is needed in plumbing, heating, HVAC refrigeration, power generation, laundry, and air compressor. The estimated total cost to repair the deficiencies is \$2,600,900.



2.1.M.1

REPLACE SANITARY FIXTURES ON THE 7TH FLOOR

A. Description:

Replace enamel coated sanitary fixtures on the 7th floor with stainless steel units. There are 48 toilets, 63 lavatories and 43 lavatory/toilet combination units to be replaced.

B. Explanation/Justification:

The coatings of existing fixtures peel off and it is impossible to keep these fixtures clean.

C. Cost:

|              |           |
|--------------|-----------|
| Design       | 17,000    |
| Construction | 273,700   |
| Inspection   | 17,000    |
| <hr/>        |           |
| TOTAL        | \$307,700 |



## 2.1.M.2

INSTALL BACKFLOW PREVENTERS DUE TO HEALTH HAZARDSA. Description:

Install one (1) Double Check Valve at the building cold water supply main and eight (8) reduced pressure backflow preventers on hot and cold water lines serving laboratories handling hazardous or toxic materials (Toxicology, Pathology, Criminology, Photo Laboratories).

B. Explanation/Justification:

There is no backflow prevention devices on water main and on hot and cold lines serving the above laboratories. Thus the City water is not protected from potential contamination from the building and the building is not protected from potential contamination from the laboratories.

Backflow preventers are needed to meet the requirements of the City Plumbing Code.

C. Cost:

|              |                 |
|--------------|-----------------|
| Design       | 3,000           |
| Construction | 14,300          |
| Inspection   | 1,500           |
| <u>TOTAL</u> | <u>\$18,800</u> |

2.1.M.3

REPLACE OIL RECOVERY SYSTEMS ON TWO CHILLERS

A. Description:

Replace the oil recovery system including air purge of each of the two chillers.

B. Explanation/Justification:

The oil recovery systems of chillers are aged and not working well. These systems need to be replaced for proper lubrication of bearings.

C. Cost:

|              |         |
|--------------|---------|
| Design       | 1,000   |
| Construction | 7,000   |
| Inspection   | 500     |
| <hr/>        |         |
| TOTAL        | \$8,500 |

2.1.M.4

OVERHAUL TWO EMERGENCY POWER DIESEL GENERATORS

A. Description:

Overhaul two (2) emergency power diesel generators (100 KVA and 600 KVA).

B. Explanation/Justification

The two (2) emergency power diesel generators need to be overhauled to insure reliable service for the next 20 years.

C. Cost:

|              |          |
|--------------|----------|
| Design       | 7,500    |
| Construction | 50,000   |
| Inspection   | 6,000    |
| <hr/>        |          |
| TOTAL        | \$63,500 |

2.1.M.5

REPLACE WASHERS AND DRYERS

A. Description:

Provide and install two (2) gas dryers with 125 lbs. capacity each and one (1) electric washer of 150 lbs. capacity to replace worn-out equipment at the laundry room on the 7th floor. A new gas line is to be laid from the line on the roof to the laundry room to supply gas to new dryers.

B. Explanation/Justification:

Worn-out equipment (dryers T-1, T-2, T-3 and washers W-1, W-2) need to be replaced. New equipment have to meet the current loads of the linen services.

C. Cost:

|              |                |
|--------------|----------------|
| Design       | 7,400          |
| Construction | 67,200         |
| Inspection   | 5,000          |
| <hr/> TOTAL  | <hr/> \$79,600 |

## 2.1.M.6

RENOVATE SHOWER UNITS, 6TH AND 7TH FLOORSA. Description:

Renovate 44 shower units on the 6th and 7th floors.

The units shall be lined with stainless steel sheet metal and provided with new exhaust systems.

B. Explanation/Justification:

The existing shower units (18 units on the 6th floor and 26 units on the 7th floor), lined with ceramic tiles and without ventilation, and deteriorating. Tiles fall off, waterproofing coatings peel off and water leaks into living areas and corridors.

The renovation of shower units shall prevent accidents and health hazards to inmates. New exhaust systems shall vent excessive moisture build-up in shower and adjacent living areas due to heavy use of these units.

C. Cost:

|              |           |
|--------------|-----------|
| Design       | 19,000    |
| Construction | 193,600   |
| Inspection   | 18,000    |
| <hr/>        |           |
| TOTAL        | \$230,600 |

2.1.M.7

CORRECT EXHAUST DEFICIENCY AT THE 7TH FLOOR KITCHEN

A. Description:

Extend exhaust ductwork and add registers to areas where heat is generated. Replace exhaust fan/motor by more powerful unit.

B. Explanation/Justification:

The exhaust system of the kitchen is insufficient. The newly installed vegetable storage refrigeration unit exhausts hot air into the kitchen and is worsening the ventilation of the whole area. Temperatures are presently very high in the kitchen. The existing 8,000 CFM and 2.0 HP fan/motor unit should be replaced by a 10,000 CFM and 2.5 HP fan/motor unit. Exhaust duct should be extended to heat sources, especially the new refrigeration unit.

C. Cost:

|              |                |
|--------------|----------------|
| Design       | 3,500          |
| Construction | 12,000         |
| Inspection   | 2,000          |
| <hr/> TOTAL  | <hr/> \$17,500 |



2.1.M.8

ADD HEATING COILS FOR THE WOMEN'S SECTION, JAIL #1

A. Description:

Three (3) booster heating coils and controls are to be installed in ductwork at the women's section of the jail #1.

B. Explanation/Justification:

Currently, the same duct supplies hot air to the newly created male dormitory and the women's section of the jail #1. There is a sufficient temperature difference between those two areas. The dormitory shall be too warm if the women's section is heated comfortably. Booster heating coils will permit raising the temperature in the women's section while preventing the dormitory from overheating.

C. Cost:

|              |                 |
|--------------|-----------------|
| Design       | 2,500           |
| Construction | 6,500           |
| Inspection   | 1,200           |
| <u>TOTAL</u> | <u>\$10,200</u> |



2.1.M.9

REPAIR/OVERHAUL THE COOLING TOWER

A. Description:

Repair/overhaul the existing wooden cooling tower including fixing floor leaks.

B. Explanation/Justification

The existing three-fan wooden cooling tower on the roof of the building is aged and needs to be overhauled to insure reliable service for the next 20 years. Wooden slats are to be replaced, leaking floors to be fixed, motors and fans to be overhauled or replaced.

C. Cost:

|              |          |
|--------------|----------|
| Design       | 10,000   |
| Construction | 60,000   |
| Inspection   | 7,000    |
| <hr/>        |          |
| TOTAL        | \$77,000 |

2.1.M.10      REPLACE ONE CHILLER

A.    Description:

Replace the aged and worn-out 535 ton chiller with a new 630 ton unit. Upgrade the cooling tower accordingly.

B.    Explanation/Justification:

There are two identical chillers of 535 tons capacity each at the Hall of Justice. One was designed to meet the cooling loads of the facility while the other one is a back-up unit.

With the addition of two floors, entirely air conditioned, of the adjacent Coroner's building, and numerous heat generating equipment in the buildings, one unit cannot meet the current loads. The second unit has to put into service on warm days.

The operating unit is aged and worn-out.

It is recommended that the operating unit be replaced by a more powerful unit with about 630 tons capacity. The new unit shall have two compressors thus permitting operation with high efficiency under different cooling load requirements.

One more fan is to be added to the existing three-fan cooling tower to meet requirements of the new chiller.

C.    Cost:

|              |                  |
|--------------|------------------|
| Design       | 38,000           |
| Construction | 495,000          |
| Inspection   | 35,000           |
| <u>TOTAL</u> | <u>\$568,000</u> |

2.1.M.11 REPLACE ONE AIR COMPRESSOR OF THE PNEUMATIC CONTROL SYSTEM

A. Description:

Replace one (1) aged and worn-out 20 HP air compressor with a new 30 HP unit. Replace electrical conduit, wiring, circuit breaker and starter to accommodate the new unit.

B. Explanation/Justification:

There are two identical air compressors of 20 HP capacity each to energize the pneumatic controls of the HVAC system of the building (design values: 72 CFM, 160 psi). One was designed to meet the air volume and pressure requirements, while the second one is used as back-up unit.

With the addition of two floors to the Coroner's building, one unit cannot handle the need of the entire facility and the back-up unit often has to put into service.

The operating unit is aged and worn-out. It is recommended that the operating unit be replaced by a more powerful unit (97 CFM, 160 psi, 30 HP). The other unit shall be kept as a back-up.

C. Cost:

|              |          |
|--------------|----------|
| Design       | 3,500    |
| Construction | 21,000   |
| Inspection   | 2,500    |
| <hr/>        |          |
| TOTAL        | \$27,000 |

2.1.M.12      CLEAN HVAC DUCTS ON THE 5TH, 6TH, AND 7TH FLOORS

A.    Description:

About 70,000 square feet of duct surfaces need to be cleaned on the 5th, 6th, and 7th floors of the building.

B.    Explanation/Justification:

Existing low efficiency filters are the cause of dirt build-up in the building ductwork.

The ductwork of the 1st thru 4th floors was cleaned in 1985. The ductwork on the 5th thru 7th floors, however, has never been cleaned since the original installation thirty years ago.

The inside of the ductwork shall be vacuumed. Corroded ducts shall be mechanically brushed and painted.

The work shall affect 40,000 sq. ft. of supply and exhaust ducts for the 5th floor (air is recirculated), 17,000 sq. ft. and 13,000 sq. ft. of supply ducts for the 6th and 7th floors, respectively (air is not recirculated).

Cleaning ductwork and registers shall improve not only the air quality in the building, but also the volume output (CFM) of the HVAC system.

C.    Cost:

|              |           |
|--------------|-----------|
| Design       | 28,000    |
| Construction | 217,800   |
| Inspection   | 19,600    |
| <hr/>        |           |
| TOTAL        | \$265,400 |

2.1.M.13

ELIMINATE HEALTH HAZARDS DUE TO ASBESTOS INSULATION

A. Description:

To eliminate health hazards due to asbestos, deteriorated or falling asbestos insulation shall be removed, exposed asbestos shall be encapsulated and locations with unexposed or inaccessible asbestos shall be sealed.

Major work of this project shall consist of encapsulating about 16,000 feet of piping of various sizes and HVAC equipment like boilers, chillers, heat exchangers and tanks.

B. Explanation/Justification:

Asbestos is used as insulating material for piping and equipment throughout the building. This includes cooling, heating, hot, drinking water piping and steam piping.

Health hazards due to asbestos shall be eliminated or significantly reduced by the measures described above.

C. Cost:

|              |                  |
|--------------|------------------|
| Design       | 28,000           |
| Construction | 217,800          |
| Inspection   | 19,600           |
| <u>TOTAL</u> | <u>\$265,400</u> |

2.1.M.14

REPLACE CORRODED FITTINGS ON COLD WATER LINES

A. Description:

Fittings at approximately 20 locations on water mains and headers, and approximately 100 locations on runouts from risers are to be replaced with new fittings and dielectric couplings.

B. Explanation/Justification:

Domestic cold water piping of the building is corroded at fittings near dissimilar metal junctions.

Piping corrosion has occurred in the basement and especially in plumbing chases where copper runouts are connected to galvanized steel risers.

At many locations, the corrosion attacks the pipes so severely that leakage has occurred.

Corroded fittings and pipes have to be replaced and dielectric couplings shall be installed to prevent electrolytic actions.

C. Cost:

|              |          |
|--------------|----------|
| Design       | 3,500    |
| Construction | 16,500   |
| Inspection   | 3,000    |
| <hr/>        |          |
| TOTAL        | \$23,000 |



2.1.M.15      OVERHAUL SEWAGE AND RAIN WATER SUMPS AND EJECTORS

A.    Description:

The seven (7) sumps, including pumps, need to be overhauled. Sumps shall be cleaned, deposited material (sand and others) shall be removed. Sump pumps need to be evaluated for overhauling or replacement.

B.    Explanation/Justification:

There are five (5) sewage ejectors and two (2) rain water ejectors in the building. They were installed nearly thirty years ago without any documented records of overhauling.

Rain water sumps are partially filled with sand.

These sumps and pump ejectors need to be overhauled to insure reliable service for the next twenty years.

C.    Cost:

|              |          |
|--------------|----------|
| Design       | 3,000    |
| Construction | 24,200   |
| Inspection   | 2,500    |
| <hr/>        |          |
| TOTAL        | \$31,700 |

2.1.M.16     REPLACE HEATING, COOLING COILS AND CONTROLS

A.     Description:

Replace about 50 cooling coils (8 rows, 625 square feet total) and about 70 heating coils (1 row, 800 square feet total). Replace controls in all fan rooms.

B.     Explanation/Justification:

Water heating and cooling coils are nearly thirty years old. Some are leaking.

Controls in all fan rooms, directly facing the air streams and damaged by the air impact, are to be replaced. New controls shall be out of the way of the air main streams and protected by enclosures.

All heating and cooling coils and controls need to be replaced to insure a reliable service for the next 20 years.

C.     Cost:

|              |                  |
|--------------|------------------|
| Design       | 33,400           |
| Construction | 418,000          |
| Inspection   | 30,000           |
| <u>TOTAL</u> | <u>\$481,400</u> |

2.1.M.17     REPLACE THE FREEZER AND TWO REFRIGERATORS IN THE 7TH FLOOR KITCHEN

A.    Description:

Replace the freezer and two refrigerators (for meat and vegetable storage) in the 7th floor kitchen.

B.    Explanation/Justification:

The 0.5 ton freezer and two refrigerators (.8 ton capacity each) in the 7th floor kitchen are aged and worn-out. These equipment need to be replaced to ensure reliable service for the next 20 years.

C.    Cost:

|              |          |
|--------------|----------|
| Design       | 7,000    |
| Construction | 40,000   |
| Inspection   | 6,000    |
| <hr/>        |          |
| TOTAL        | \$53,000 |

2.1.M.18 REPLACE HEAT EXCHANGER TUBES OF CONVERTERS W\*TH STAINLESS  
STEEL TUBES

A. Description:

Replace heat exchanger tubes of four (4) hot water converters with stainless steel tubes.

B. Explanation/Justification:

Existing tubes, approximately 30 years old, need to be replaced. Stainless steel tubes shall ensure long and dependable service.

C. Cost:

|              |          |
|--------------|----------|
| Design       | 5,000    |
| Construction | 40,000   |
| Inspection   | 4,000    |
| <hr/>        |          |
| TOTAL        | \$50,000 |

2.1.M.19     REPLACE TWO BOILER FEED PUMPS

A.    Description:

Replace two (2) boiler feed pumps.

B.    Explanation/Justification:

The two 25 HP each feed pumps are aged, worn-out and leaking. These units need to be replaced to ensure reliable service for the next 20 years.

C.    Cost:

|              |          |
|--------------|----------|
| Design       | 3,000    |
| Construction | 17,600   |
| Inspection   | 2,000    |
| <hr/>        |          |
| TOTAL        | \$22,600 |

#### 2.1.E. ELECTRICAL DEFICIENCIES

The fire alarm system does not cover the entire building and the existing system is old, unreliable and difficult to maintain. The emergency power system is unreliable due to old and hard to maintain transfer switches. The main Switchboard breakers need to be replaced, as does one of the Distribution Switchboards to provide safe reliable power.



## 2.1.E.1

REPLACE TRANSFER SWITCHES FOR EMERGENCY POWERA. Description:

Replace place three existing transfer switches used for transferring electrical power from P.G.&E. to the building emergency generator. The transfer switches are located in the Boiler Room, Third Floor Communication Closet of the Main Building, and in the basement of the Coroner's Building.

B. Explanation/Justification:

The existing transfer switches are old, hard to maintain, and do not function properly. Replacement parts for the switches are not obtainable.

The new transfer switches are up-to-date solid state type and will require less maintenance.

C. Cost:

|                         |          |
|-------------------------|----------|
| Design                  | 3,000    |
| Construction            | 38,000   |
| Construction Management | 3,000    |
| <hr/>                   |          |
| TOTAL                   | \$44,000 |

2.1.E.2

REPLACE EXISTING FIRE ALARM EQUIPMENT IN COUNTY JAILS NO. 1  
AND NO. 2

A. Description:

Replace existing pull stations and alarm bells on the 6th floor, 7th floor and roof. Reconnect same to Central Control Panel located in the new addition area via an annunciator panel in the Communication Room on the 4th floor and the relays in the Electrical Equipment Room on the 3rd floor. Remove the existing halon equipment in the Communication Room (4th floor). Replace the relays and the reset box in the Electrical Equipment Room (3rd floor).

B. Explanation/Justification:

The pull stations are old and some are inoperative. The relays are old and not reliable. The halon equipment is not in use anymore.

The task of maintaining the pull stations and relays is very difficult. The equipment is obsolete and repair parts are not obtainable. The halon equipment is taking up wall space which can be used for other future equipment.

C. Cost:

|                         |                 |
|-------------------------|-----------------|
| Design                  | 2,100           |
| Construction            | 17,000          |
| Construction Management | 2,100           |
| <u>TOTAL</u>            | <u>\$21,200</u> |

2.1.E.3      EXTEND EXISTING FIRE ALARM SYSTEM TO UNPROTECTED AREAS OF THE BUILDING

A.    Description:

Install fire alarm manual stations, audio-visual alarm devices and related equipment to the unprotected areas of the building (1st thru 5th floors).

B.    Explanation/Justification:

A fire alarm system was installed in the newest addition to the Hall of Justice but was not extended to cover the existing building areas, which do not have manual stations or audio-visual alarm warning devices.

In the event of a fire, manual stations provide a means to sound the alarm. Audio-visual alarm devices would provide warning to leave the building. Periodic drills would condition personnel to evacuate in an orderly manner and lessen chances of panic should a fire occur.

C.    Cost:

|                         |           |
|-------------------------|-----------|
| Design                  | 10,000    |
| Construction            | 105,000   |
| Construction Management | 10,000    |
| <hr/>                   |           |
| TOTAL                   | \$125,000 |

2.1.E.4

ELECTRICAL SYSTEM IMPROVEMENTS

A. Description:

Replace existing circuit breakers in main switchboards with electronic trips circuit breakers and install ground fault protection.

B. Explanation/Justification:

The main switchboards have circuit breakers with magnetic trips. These circuit breakers do not have ground fault protection.

Existing circuit breakers have magnetic trips. These require testing every three years for reliability and accuracy of setting. Installation of electronic (Static) trips would eliminate testing and adjusting and insure tripping at the designated settings.

The existing breakers magnetic trips are becoming less reliable and more likely to trip unnecessarily, causing disruption to the electrical power to the building. Replacement is necessary to provide a reliable electrical system for the Hall of Justice.

Ground fault protection is needed for the main service disconnects and feeder disconnects to all load centers to prevent potential damage to equipment and injury to personnel. This type of protection is required for new construction under present electrical codes.

C. Cost:

|                         |           |
|-------------------------|-----------|
| Design                  | 20,000    |
| Construction            | 144,000   |
| Construction Management | 15,000    |
| <hr/>                   |           |
| TOTAL                   | \$179,000 |

2.1.E.5      REPLACE DISTRIBUTION SWITCHBOARD GDHA

A.    Description:

Replace existing Distribution Switchboard GDHA which is located on the Ground Floor.

B.    Explanation/Justification:

This switchboard experienced a black-out caused by water leakage from the floors above. The bus bars were burned, and are in poor condition. The circuit breakers are old and in poor condition.

The switchboard should be replaced to forestall possible failure as its condition gradually worsens.

C.    Cost:

|                         |          |
|-------------------------|----------|
| Design                  | 2,500    |
| Construction            | 14,000   |
| Construction Management | 1,500    |
| <hr/>                   |          |
| TOTAL                   | \$18,000 |





2. EXISTING FACILITIES

2.2 RECOMMENDED IMPROVEMENTS

2.2.A Architectural

2.2.S Structural

2.2.M Mechanical

2.2.E Electrical

## 2.2.A ARCHITECTURAL IMPROVEMENTS

### Introduction:

The improvements listed in the following section are primarily desired in order to increase the life safety of the buildings' occupants, and secondarily to modernize the building in response to the increased demand created by a larger population, and facilitate the flow of people and goods through the building.

When all the improvements are completed, the occupants' safety will be greatly enhanced as will their ability to circulate throughout the structure.

AUTOMATE DOORS AND GATESA. Description:

Replace existing hinged primary doors and gates throughout the 6th and 7th floors, including jail and visitors' lobbies, corridors, cell blocks and individual cells. New doors to be electrically operated from central monitoring station(s) and sub-stations, and shall be sliding doors. Audio-visual devices required for remote identification are to be included.

B. Explanation/Justification:

The existing facility doors are all manually operated with the following results:

1. An attendant must always be present at the lobby area to screen visitors/staff before admittance. Some of the doors are separated by a distance of 100 feet, requiring the attendant to be fleet of foot, and creating delays for those awaiting entrance.
2. The life-safety of the inmates is compromised as valuable time is required for staff to get to and unlock all of the doors of an evacuation is ever required.
3. The majority of the existing locks must be locked and unlocked with a key. In the event of concerted effort by the inmates to leave the cell, slamming the door closed is not sufficient; the key must be inserted and the lock thrown in order to secure the door. (A separate item in this report addresses a more immediate solution to this particular concern; please see item number 1A.3 in the Architectural Deficiency portion of this report.)

C. Cost:

|              |                   |
|--------------|-------------------|
| Design       | 93,000            |
| Construction | 1,170,000         |
| Inspection   | 65,000            |
| <hr/> TOTAL  | <hr/> \$1,328,000 |

## 2.2.A.2

JAIL INTERCOM SYSTEMA. Description:

Provide 133 intercoms in the inmate and staff areas of the jail facilities, with 7 master monitors in staff areas.

B. Explanation/Justification:

Only a few staff intercoms are presently available in the jail. It would be an improvement to the personal safety of the inmates, as well as the staff, to have widespread access to means of communication in the cell blocks and corridors. This will be an 'All-Call' system in the staff portions of the jail.

C. Cost:

|              |          |
|--------------|----------|
| Design       | 10,000   |
| Construction | 77,000   |
| Inspection   | 5,000    |
| <hr/>        |          |
| TOTAL        | \$92,000 |

6TH FLOOR INTERVIEW/VISITING AREA REDESIGNA. Description:

Remove existing partitions, seating, and furnishings in the subject area, and redesign for more acceptable functioning.

B. Explanation/Justification:

The existing configuration mixes the inmates slated for interviews with those who have visitors, creating a "tracking" problem for the staff; an inmate finishing an interview can mingle with those who have visitors and vice versa.

The redesign of these areas will be modeled after the successful existing arrangement of the 7th floor, separating the access/egress to and from the individual functions.

C. Cost:

|              |                  |
|--------------|------------------|
| Design       | 28,000           |
| Construction | 277,000          |
| Inspection   | 14,000           |
| <u>TOTAL</u> | <u>\$319,000</u> |

## 2.2.A.4

6TH FLOOR MUG ROOM/MEDICAL REMODELA. Description:

Redesign layout of existing Processing Area. Move Mug Room function into Processing Area and expand Medical Services into space formerly occupied by Mug Room.

B. Explanation/Justification:

The Mug Room is much larger than required and the Processing Area could be redesigned to be more efficient. The Medical Area is greatly overcrowded, suffering from a lack of space for all functions, from storage to office and examining. Even with the additional space, Medical Services will still be overcrowded, but no other space is available in the facility.

C. Cost:

|              |                  |
|--------------|------------------|
| Design       | 13,000           |
| Construction | 154,000          |
| Inspection   | 7,500            |
| <u>TOTAL</u> | <u>\$174,500</u> |



LOADING DOCK IMPROVEMENTSA. Description:

Renovate the existing loading dock to improve vehicular circulation and relocate the garbage holding area from the current location.

B. Explanation/Justification:

The existing ramps are narrow, steep and too sharply curved for larger trucks to descend to the loading dock area. Often times materials must be delivered by hand truck or wheeled carts which are difficult to control on the ramps and endanger pedestrians and property along the delivery route. The garbage dumpster is currently tucked into the loading dock area, constricting passage of goods and creating odor and hygiene problems in adjacent areas.

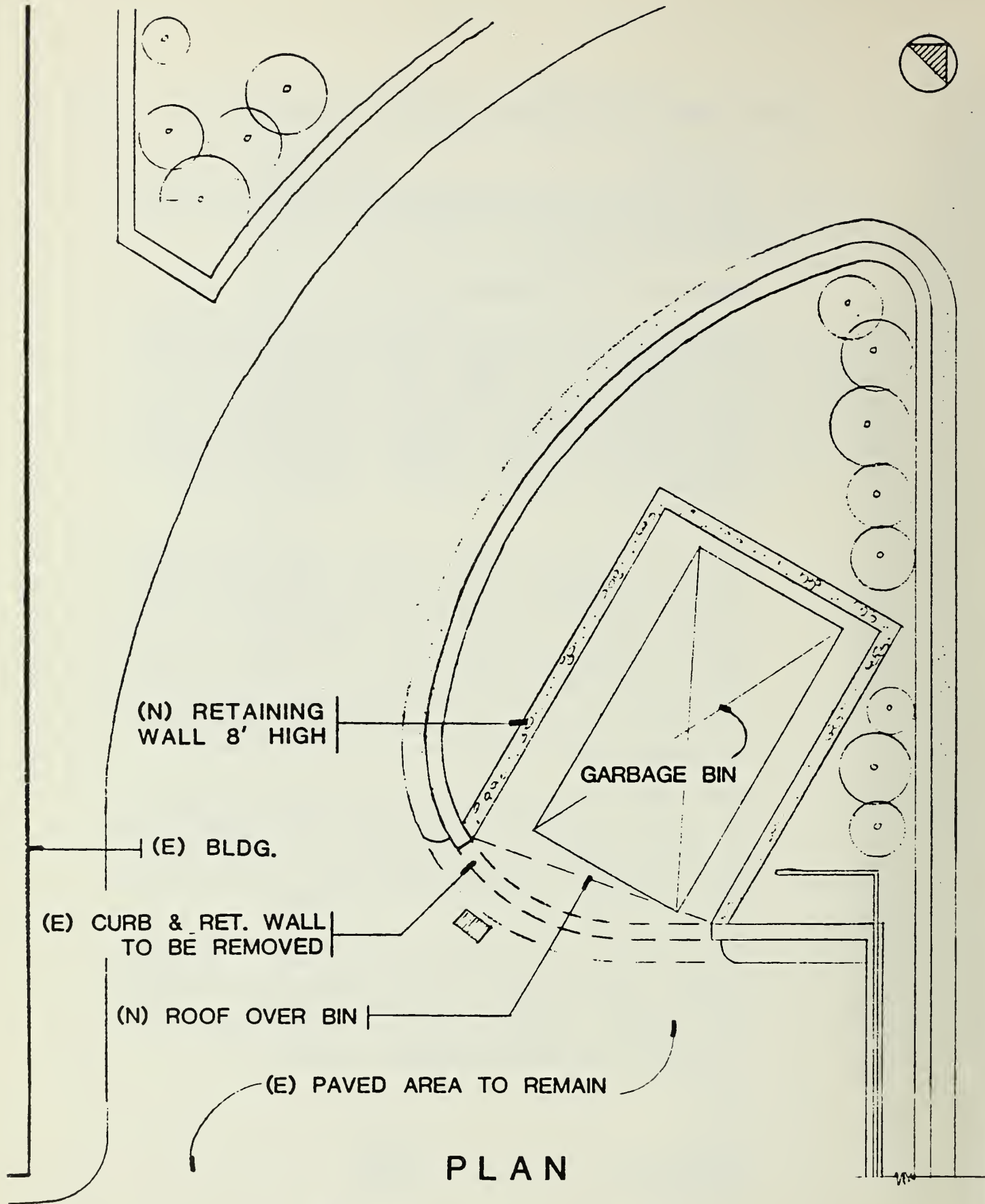
This office has been unable to achieve any satisfactory solution to the situation with the ramps. The grade differential between the street and the loading dock, combined with the physical constraints of the Coroner's Loading Dock on the north and Bryant Street on the south, preclude any expansion of the area the dock encompasses. The existing ramps are already steeper (with slopes up to 1:7) than recommended maximums and any widening attempt would only increase existing slopes by reducing their radii and shortening their length.

With regard to the garbage situation, some relief from the existing problems could be obtained by relocating the garbage dumpster to a location at the northern end of the depressed parking court adjacent to the loading dock, easing the existing constriction and alleviating the odor/hygiene problem to a large degree.

The project would consist of the construction of a covered "niche" nearly perpendicular to the existing northern retaining wall of the parking area, into which the garbage dumpster would be inserted, thereby preserving the existing parking area. See Figure A for a sketch of the proposed dumpster location.

C. Cost:

|              |                 |
|--------------|-----------------|
| Design       | 9,000           |
| Construction | 45,000          |
| Inspection   | 4,000           |
| <u>TOTAL</u> | <u>\$58,000</u> |



## GARBAGE DUMPSTER RELOCATION PROPOSAL

FIGURE A

A. Description:

Modify existing elevator #1 so Sheriff's Department could use it for prisoner transportation exclusively. Create central jail control station in existing Concession space, modify existing public entrance at Main Lobby.

B. Explanation/Justification:

There are two elevators serving the detention facilities on the 6th and 7th floors. Elevator #9 serves as inmate transportation and stops only at the basement, 6th and 7th floors; elevator #1 serves as transportation for all the non-inmate persons visiting the detention facilities, stopping at the basement and all other floors. On those occasions when elevator #9 is out of service, elevator #1 is necessarily used for inmate transportation, posing a serious risk to the safety of all persons in the building.

The proposal is to incorporate elevator #1 into the Sheriff's Department to secure that elevator for inmate transportation.

Included in this proposal would be the following:

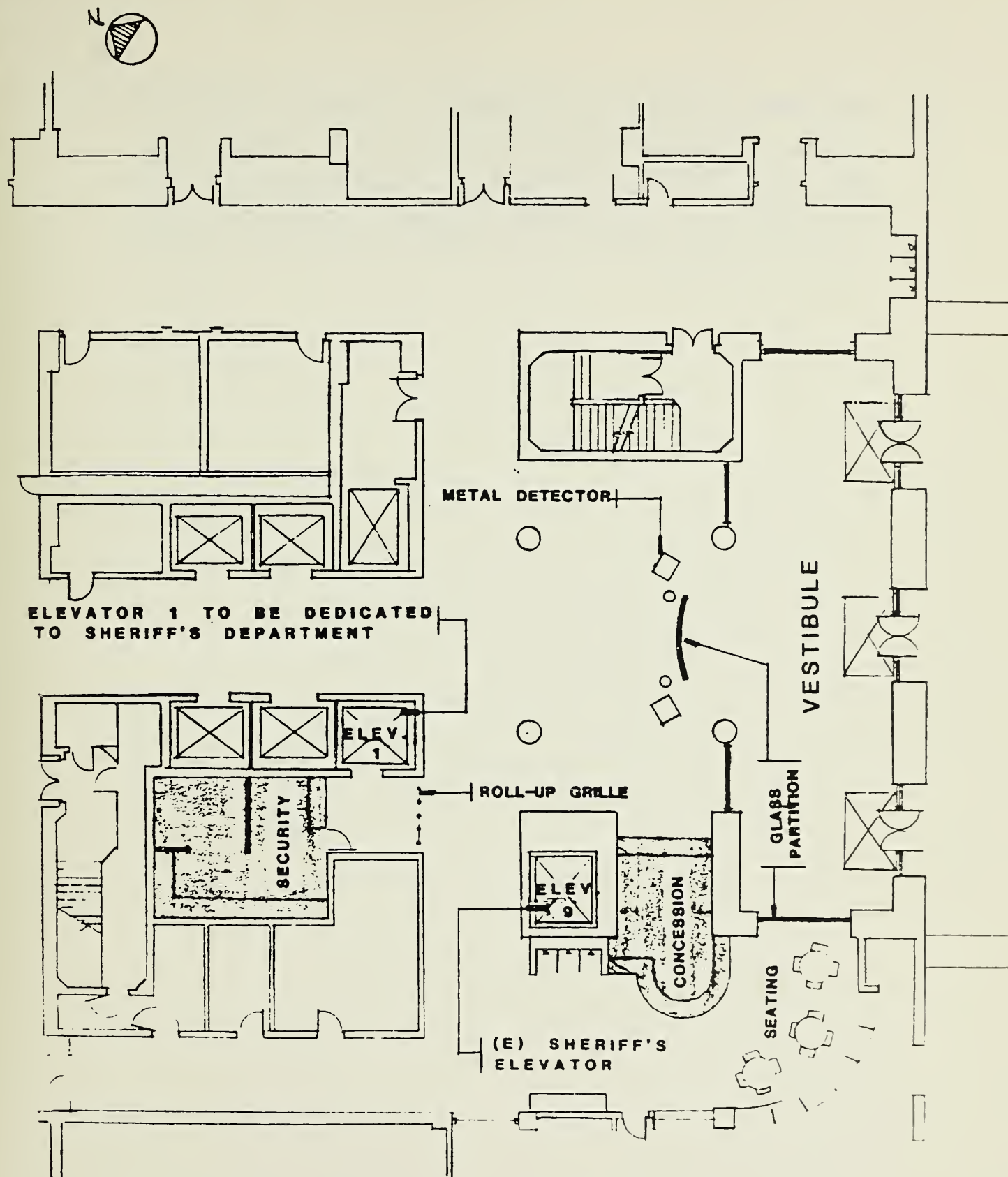
1. Revise partitioning at basement level to access elevator #1 from the jail entrance.
2. Remodel the public lobby at the main floor, as shown in Figure B on the page following:
  - a. Move existing concession stand to a central location in the lobby area.
  - b. Construct a central H.O.J. monitoring station for the jail facilities in the area vacated by the Concession.
  - c. Create a sallyport in front of elevator #1.
  - d. Re-design the existing security screening at the public entrance to alleviate the existing bottle neck and circuitous route.
3. Revise elevator #1 controls to a key-control system.

4. Maintain public access to jail facilities by extending one of the existing public elevators to the 7th floor and exiting into the existing visitors lobby.

C. Cost:

|              |           |
|--------------|-----------|
| Design       | 25,000    |
| Construction | 255,000   |
| Inspection   | 14,000    |
| <hr/>        |           |
| TOTAL        | \$294,000 |





**MAIN LOBBY PLAN (PROPOSED REMODEL)**

FIGURE B

2.2.S RECOMMENDED IMPROVEMENTS - STRUCTURAL

There are no structural improvements required at this time.



#### 2.2.M RECOMMENDED IMPROVEMENTS - MECHANICAL

Investigations of the mechanical systems resulted in the identification of eleven (11) systems in need of improvement. Recommended improvements include fire protection, upgrading sewer and air filtration systems, plumbing and ventilation. The estimated total cost to complete the improvements is \$2,938,400.

IMPROVE LIFE SAFETY AGAINST THE HAZARDS OF FIRE AT THE JAILS  
- INSTALL SMOKE REMOVAL SYSTEMA. Description:

Provide additional means of egress, compartmentalize the jails (6th and 7th floors) with fire barriers and install smoke removal systems for critical areas of the jails.

B. Explanation/Justification:

Provide reasonable and adequate life safety against the hazards of fires to make the existing jail facility conform to the provisions of current codes and regulations

Additional exits shall be provided for dormitories or other locations to facilitate the evacuation of inmates in case of fires. One stairway shall be upgraded to a smokeproof enclosure exit as per code requirement. The 6th and 7th floors shall be compartmentalized by fire barriers. These barriers shall stop or delay the spreading of fire, thus allowing the transfer of inmates from one compartment to another without complete evacuation of the facility. Smoke barriers shall also be installed to enclose certain critical areas of the jails like isolation, detoxication, and single cells and dormitories. Mechanical venting shall be provided to quickly remove the smoke from those areas to ease the control of fires. Refer to item 2.M.2 for additional fire protection for the jails.

C. Cost:

|              |           |
|--------------|-----------|
| Study        | 50,000    |
| Design       | 65,000    |
| Construction | 807,000   |
| Inspection   | 50,000    |
| <hr/>        |           |
| TOTAL        | \$972,000 |

PROVIDE FIRE SPRINKLERS FOR CRITICAL AREAS OF THE JAILSA. Description:

Provide fire sprinklers at critical areas of the jails. These areas include single cells, storage areas, the police auditorium on the 6th floor visitor lobbies. The total area to be protected is about 14,200 square feet. Fire sprinkler systems shall be supervised.

B. Explanation/Justification:

Install fire sprinklers at critical areas to provide reasonable and adequate life safety against the hazards of fires. This will make the existing jail facility conform to the provisions of current codes and regulations. Also refer to item 2.M.1 for other life safety improvements. The breakdown of the areas to be sprinklered is as follows:

|                 |   |                |
|-----------------|---|----------------|
| Cells           | : | 4,300 sq. ft.  |
| Storage areas   | : | 3,315 sq. ft.  |
| Auditorium      | : | 4,390 sq. ft.  |
| Visitor lobbies | : | 1,210 sq. ft.  |
| Others          | : | 985 sq. ft.    |
| Total           | : | 14,200 sq. ft. |

C. Cost:

|              |         |
|--------------|---------|
| Design       | 24,800  |
| Construction | 190,000 |
| Inspection   | 17,200  |

---

|       |           |
|-------|-----------|
| TOTAL | \$232,000 |
|-------|-----------|

ADD FIRE SPRINKLERS ON 1ST THRU 5TH FLOORSA. Description:

Fire sprinklers should be installed at fire hazardous locations such as storage rooms, office areas, court rooms, laboratories, kitchen areas, etc., on the 1st thru 5th floors.

About a 100,000 square foot area needs to be sprinklered.

B. Explanation/Justification:

The 1st thru 5th floors of the building do not have an automatic fire fighting system, except at very few locations (Toxicology and Pathology laboratories in the Coroner's building, the emergency 911 center, the computer room, etc.).

Fire sprinklers or other appropriate automatic fire fighting systems should be installed in fire hazardous locations such as storage rooms, office areas, court rooms, kitchen areas, laboratories, etc.

Install automatic fire fighting systems to improve life safety against the hazards of fires to make the existing facility conform to the provisions of current codes and regulations.

C. Cost:

|              |                  |
|--------------|------------------|
| Design       | 70,000           |
| Construction | 660,000          |
| Inspection   | 49,000           |
| <u>TOTAL</u> | <u>\$779,000</u> |

2.2.M.4      INSTALL TOILET PRIVACY SCREENS ON 7TH FLOOR

A.    Description:

Install 97 toilet privacy screens on the 7th floor.

B.    Explanation/Justification:

There are no screens compartmentalizing toilet areas on the 7th floor. Privacy screens were installed on the 6th floor in 1985.

The installation of toilet privacy screens is needed to meet requirements of the current Title 15 - Crime Prevention and Corrections of the California Administration Code (toilets, washbasins should not be in the view of persons dining). Presently, inmates eat in the dormitories or day rooms.

C.    Cost:

|              |                  |
|--------------|------------------|
| Design       | 9,000            |
| Construction | 115,500          |
| Inspection   | 8,500            |
| <u>TOTAL</u> | <u>\$133,000</u> |



IMPROVE THE JAILS' VENTILATION SYSTEMA. Description:

Replace sheaves and driving belts of fan/motor units in four fan rooms to increase the volume output (CFM) of supply exhaust fans.

Clean the exhaust network grid of the fan room on the 7th floor.

B. Explanation/Justification:

The ventilation in the jails (6th and 7th floors) should be improved to avoid uncomfortable temperatures during hot days.

New sheaves and belts shall increase fan speeds, thus increasing the air volume output (CFM).

The following CFM increases may be obtained based on existing fans and motors characteristics:

|                        |     |
|------------------------|-----|
| 6th floor supply fan:  | 10% |
| 7th floor supply fan:  | 6%  |
| 7th floor exhaust fan: | 10% |
| Penthouse exhaust fan: | 5%  |

Presently, the exhaust network grid of the 7th floor fan room is at approximately 50% of capacity and needs to be cleaned.

C. Cost:

|              |               |
|--------------|---------------|
| Design       | 1,500         |
| Construction | 6,600         |
| Inspection   | 1,000         |
| <hr/> TOTAL  | <hr/> \$9,100 |



INSTALL A SEPARATE SEWER SYSTEM FOR THE JAILSA. Description:

Install about 1,850 feet of cast iron sewer piping and 60 floor drains to separate the jails' sewer system from the remaining sewer network of the building.

B. Explanation/Justification:

Presently, all seven floors of the building are served by common sewer risers. The clogging of sewer risers, originating from the jails, often creates flooding at other floors which are mostly office spaces. There are no floor drains at the jails' plumbing chases.

The installation of new sewers and floor drains for the jails shall eliminate the flooding of the floors due to clogged sewers originating from the jails.

C. Cost:

|              |           |
|--------------|-----------|
| Design       | 20,000    |
| Construction | 145,000   |
| Inspection   | 15,000    |
| <hr/>        |           |
| TOTAL        | \$180,000 |

IMPROVE THE AIR FILTRATION SYSTEM OF THE BUILDINGA. Description:

Improve the air filtration system of the building by:

- adding second filters to the existing pre-filters
- replacing 17 electric motors
- replacing corroded outside air dampers with aluminum dampers

B. Explanation/Justification:

Existing air filters (Roll-O-Matic, American Air Filter Co.) are not adequate. These filters, with a rated efficiency around 20%, should only be used as pre-filters.

Second filters should be added to the existing filters to increase the efficiency to an acceptable level. Second filters are to be installed in 13 fan rooms.

Supply fan motors, nearly 30 years old, need to be replaced and upgraded to accommodate additional air resistance due to the new filters. Seventeen (17) new motors shall be installed.

New conduits, wiring, circuit breakers, starters are to be installed for new motors.

Steel outside air dampers at 8 fan rooms are corroded. These dampers need to be replaced with aluminum dampers.

Insufficient air filtration causes health hazards to building occupants.

C. Cost:

|              |           |
|--------------|-----------|
| Design       | 41,000    |
| Construction | 350,000   |
| Inspection   | 28,000    |
| <hr/>        |           |
| TOTAL        | \$419,000 |

2.2.M.8

ADD FOUR SHUT-OFF VALVES AND FIX EIGHT LEAKY VALVES AT  
DOMESTIC WATER PUMPS

A. Description:

At domestic water pump assemblies, four (4) shut-off valves are to be added and eight (8) existing shut-off valves, which are leaking, need to be evaluated for repacking or replacement.

B. Explanation/Justification:

Four new valves are required to break down the existing one (1) four-pump set-up into two (2) two-pump set-ups, thus avoiding disruption of the water service to the entire building during repair or maintenance of pump shut-off valves.

The existing eight (8) leaky pump shut-off valves need to be fixed.

C. Cost:

|              |          |
|--------------|----------|
| Design       | 2,000    |
| Construction | 8,800    |
| Inspection   | 1,500    |
| <hr/>        |          |
| TOTAL        | \$12,300 |

2.2.M.9

INSTALL NEW FLOOR DRAINS AT PLUMBING CHASES ON 1ST THRU 5TH FLOORS

A. Description:

Approximately 50 new floor drains are to be installed on the 1st thru 5th floors of the building.

B. Explanation/Justification:

Most of plumbing chases in the 1st thru 5th floors do not have floor drains. In case of leaks, plumbing chases will flood and water will spread from floor to floor.

New floor drains will eliminate flooding in plumbing chases.

C. Cost:

|              |                 |
|--------------|-----------------|
| Design       | 3,500           |
| Construction | 16,500          |
| Inspection   | 2,500           |
| <u>TOTAL</u> | <u>\$22,500</u> |

2.2.M.10      INSTALL SHUT-OFF VALVES ON COLD WATER LINES

A.    Description:

Shut-off valves (about 15 of sizes 2" to 5" and 100 of sizes smaller than 1.5") are to be installed on cold water mains and branches.

B.    Explanation/Justification:

There are not enough shut-off valves in the building cold water piping network, especially at risers. Presently, water service to a large area of the building has to be disrupted for relatively minor repairs.

New shut-off valves on all branches from risers serving each floor, on branches from headers in the basement that serve various parts of the building, and on runouts in each plumbing chase shall minimize the disruption of the water service during repairs.

C.    Cost:

|              |          |
|--------------|----------|
| Design       | 3,500    |
| Construction | 16,500   |
| Inspection   | 2,500    |
| <hr/>        |          |
| TOTAL        | \$22,500 |



REPAIR AND EXTEND THE PNEUMATIC TUBING SYSTEMA. Description:

Repair defective stations and extend the pneumatic tubing system to the Bail Room on the 2nd floor.

B. Explanation/Justification:

The pneumatic tubing system is a very convenient means of delivering internal mail within the building. The existing system serves the following locations which require frequent and fast communications:

|              |   |
|--------------|---|
| 7th floor    | : administration and matron offices   |
| 6th floor    | : processing room, booking office   |
| 5th floor    | : mail room   |
| 4th floor    | : central warrant, communications office  |
| 1st floor    | : traffic police control center, police information office, traffic violations fines office |
| ground floor | : property room   |

Two stations are not working and need to be fixed. The system should be extended to the Bail Room on the 2nd floor.

C. Cost:

|              |                 |
|--------------|-----------------|
| Design       | 18,700          |
| Construction | 124,600         |
| Inspection   | 13,700          |
| <hr/> TOTAL  | <hr/> \$157,000 |



#### 2.2.E ELECTRICAL IMPROVEMENTS

Security and alarm systems need to be added or replaced. Emergency lighting and power need to be supplied to areas not now served adequately by the emergency systems. Various lighting fixtures need to be replaced. The TV antenna system should be replaced. Control switches should be added for laundry room. Non-functioning boiler controls should be replaced.

CORONER'S OFFICE - SECURITYA. Description:

Provide a closed circuit television system, additional lighting as required for camera operation, addition of speakers to the existing communication system and installation of a doorway photoelectric security beam device.

B. Explanation/Justification:

The existing means of security for the Coroner's Office area consists of an inoperative electronic eye device at the business office doorway plus an inter-communication system connecting the front business office to the rear laboratory area. These devices do not provide sufficient security protection.

The Coroner says that his office had many difficult situations because of the lax security system.

He adds that the nature of his work and involvement in the investigation and judicial process require more effective security for his staff.

C. Cost:

|                         |                 |
|-------------------------|-----------------|
| Design                  | 4,200           |
| Construction            | 31,000          |
| Construction Management | 3,500           |
| <u>TOTAL</u>            | <u>\$38,700</u> |

REPLACE EXISTING FIXTURES IN VARIOUS JAIL AREASA. Description:

Replace the incandescent lighting fixtures in the Women's Dormitory, Men's Dormitory, Laundry and Kitchen Areas on the 7th floor with vandal-resistant fluorescent fixtures for adequate surveillance of prisoners.

B. Explanation/Justification:

The existing lighting fixtures are energy inefficient and do not provide sufficient lighting.

Latest codes require higher level of lighting in the jail areas. New vandal-resistant fluorescent fixtures will give twice as much light with twenty percent less energy, at fifty to eighty percent less maintenance cost.

This same modification was performed on the 6th floor and west part of 7th floor. Security and operations have been improved substantially.

C. Cost:

|                         |           |
|-------------------------|-----------|
| Design                  | 15,000    |
| Construction            | 130,000   |
| Construction Management | 15,000    |
| <hr/>                   |           |
| TOTAL                   | \$160,000 |

REPLACE BUILDING ALARM SYSTEMA. Description:

Replace building alarm system.

B. Explanation/Justification:

The existing building alarm system is connected to capacity. It is also in poor condition and no wiring diagrams exist.

The system was once serviced by a company in San Jose. The serviceman of this company who specialized in servicing this system has left and no one else in the company has any knowledge of the system. It is possible for this company or any other company to trace out the wiring and make a wiring diagram, but they quote a price of approximately \$5,000 to do so. In addition, further added cost would be required to provide added capacity. The system is obsolete and limited in versatility. Some advantages which a new system would provide are as follows:

1. All equipment would be new.
2. Require less wiring for future expansion.
3. Be easier to service.
4. Be able to control television cameras at remote locations to provide added security.
5. All wiring could be supervised to indicate shorts or broken wiring and connections.
6. Be programmed to do numerous other functions.

Recently, some additional areas needed to be added to the system for protection and it was then discovered that the San Jose company could not do the work as their experienced serviceman had just left. A temporary auxiliary burglar alarm panel is presently installed to augment the system.

C. Cost:

|                         |          |
|-------------------------|----------|
| Design                  | 5,000    |
| Construction            | 40,000   |
| Construction Management | 4,000    |
| <hr/>                   |          |
| TOTAL                   | \$49,000 |

2.2.E.4

REPLACE EXISTING FIXTURES IN SOUTHERN POLICE STATION OFFICE  
AND LOCKER ROOM

A. Description:

Replace existing lighting fixtures with more energy efficient fluorescent fixtures in the office and locker room.

B. Explanation/Justification:

Existing lighting is inadequate and energy inefficient. Better lighting is needed for effective operation of the station.

C. Cost:

|                         |                  |
|-------------------------|------------------|
| Design                  | 11,000           |
| Construction            | 92,000           |
| Construction Management | 10,000           |
| <u>TOTAL</u>            | <u>\$113,000</u> |

2.2.E.5 REPLACE CONTROLLERS IN THE BOILERS

A. Description:

Replace two of the three Master Controllers in the boilers. Replace the relay boxes with solid state type relays that have LED lights to pin point the trouble source.

B. Explanation/Justification:

The two Master Controllers are old and difficult to maintain, one of them is inoperative. The third boiler has a new Master Controller. The relay boxes are original equipment. It is difficult to obtain repair parts for them.

C. Cost:

|                         |                |
|-------------------------|----------------|
| Design                  | 1,500          |
| Construction            | 12,500         |
| Construction Management | 1,200          |
| <hr/> TOTAL             | <hr/> \$15,200 |



## 2.2.E.6

INSTALL CONTROL SWITCHES IN SEVENTH FLOOR LAUNDRY ROOMA. Description:

Install control switches for 7th Floor laundry room equipment.

B. Explanation/Justification:

The laundry equipment do not have control switches and are turned on and off by means of the panelboard circuit breakers.

Using the circuit breakers for control purposes will prematurely wear out the circuit breakers. If a circuit breaker fails, power to the equipment will be disrupted. As time passes, circuit breaker design changes and replacement circuit breakers may not be readily available.

C. Cost:

|                         |       |
|-------------------------|-------|
| Design                  | 800   |
| Construction            | 2,900 |
| Construction Management | 500   |

---

|       |         |
|-------|---------|
| TOTAL | \$4,200 |
|-------|---------|

REPLACE TELEVISION SIGNAL SYSTEM FOR JAILS NO. 1 AND NO. 2A. Description:

Replace television signal system for Jails No. 1 and No. 2 and extend wiring to the women's section.

B. Explanation/Justification:

The existing television signal wiring is not connected to the televisions in the jail areas and it is not possible to determine the condition of the system equipment, the wiring or the antenna. However, the equipment is over 25 years old and components are obsolete. Funding would be better spent to replace the signal equipment and antenna, and repull the wiring rather than trouble shoot and do patch and repair work to an inadequate and obsolete system.

Since televisions are provided for the jail areas, an adequate signal system should be provided for satisfactory operation.

C. Cost:

|                         |                 |
|-------------------------|-----------------|
| Design                  | 3,500           |
| Construction            | 26,500          |
| Construction Management | 2,500           |
| <u>TOTAL</u>            | <u>\$32,500</u> |

FURNISH ADDITIONAL EMERGENCY LIGHTING AND POWERA. Description:

Furnish additional emergency lighting and power for the following areas: Room 101 (Traffic Fine Office), 123 (EDP), 150 (Traffic Bureau), 201 (Bail Bonds Office), 460 (Finger-Printing Room) and 475 (I.D. Bureau). Furnish emergency power to the Southern Police Station.

B. Explanation/Justification:

The additional emergency lighting and power is necessary at the above locations to allow operations to continue in case of an electrical outage.

The Southern Police Station is in operation 24 hours a day and needs to have critical equipment operable such as computers, battery charger for hand-held radios and electric garage doors. Room 201 (Bail Bonds Office) is open to serve the public 24 hours a day. The rest of list all perform essential functions in connection to police work.

C. Cost:

|                         |                 |
|-------------------------|-----------------|
| Design                  | 4,000           |
| Construction            | 35,000          |
| Construction Management | 4,000           |
| <u>TOTAL</u>            | <u>\$43,000</u> |

2.2.E.9

FURNISH ADDITIONAL EMERGENCY LIGHTING AND POWER IN COUNTY  
JAIL NO. 1 AND NO. 2

A. Description:

Furnish additional emergency lighting and power in County Jail No. 1 and No. 2. In County Jail No. 1: Officers Mess, Officers Locker, Auditorium, Post No. 9, Post No. 10, Post No. 11, Men's Medical, Women's Medical, Women's Safety Cell, Women's Processing, Women's Locker, Booking, Process Tank, Holding Cell, Safety Cells, Men's Dormitory (5), Clothing Tank (3) and Court Room (Dept. 20). In County Jail No. 2: Dorms No. 1, No. 2, No. 3, Women's Booking, Women's Lockers, Women's Treatment, Men's Booking and Men's Treatment. Furnish two emergency panelboards.

B. Explanation/Justification:

Additional emergency lighting and power are necessary for the Jail facilities to continue operation during an electrical outage.

Booking and processing incoming prisoners, visual supervision of safety cells (this is mandated by the federal court) and cell areas, providing medical treatment for inmates and keeping the officers' mess and locker rooms accessible are all vital for continuous operation of the Jail facilities.

C. Cost:

|                         |                 |
|-------------------------|-----------------|
| Design                  | 5,500           |
| Construction            | 46,000          |
| Construction Management | 5,000           |
| <u>TOTAL</u>            | <u>\$56,500</u> |

2. EXISTING FACILITIES

2.3 ACCEPTABLE SYSTEMS  
(NO WORK REQUIRED)

2.3.A Architectural

2.3.S Structural

2.3.M Mechanical

2.3.E Electrical

## 2.3.A ARCHITECTURALLY ACCEPTABLE SYSTEMS

### Introduction

Although there is some minor work to be done to the exit stairs under this section, the work is primarily cosmetic and could possibly be done by the building maintenance staff at the H.O.J., or could be incorporated into one of the other projects listed in this report with a minor increase in project cost.



EXIT STAIRSA. Description:

The exit stairs are generally clean, well-lighted, and in good condition overall.

The following items were examined:

1. Paint - in good condition, no peeling, minor staining visible, minor graffiti in isolated areas.
2. Lighting - light levels were found to be adequate, fixtures were in good condition, lamps were all in place.
3. Steps and landings exhibited minor cracking in some areas. The cracking is judged to be cosmetic, not structural, for the most part.
4. Doors and locks appeared to be in good working order.
5. Exit signs were in working order and in place.
6. Some of the floor numbers are missing or partially obscured. They should be restored.
7. Railings were generally in good condition with the exception of worn paint. They were all solidly attached.
8. There was some evidence of minor moisture penetration at the upper levels of stair #5 and the 2nd and 3rd levels of stairway #7. The problem is considered minor at this point but the cause(s) should be determined and corrected.
9. The screening over the louvers at the top of stair #5 has holes in it and should be replaced.
10. The existing exit stairs are adequate for the current occupant loads; the expansion of the existing building would require either widening some of the exit stairs or the addition of new exit stairs. The cost of added exit width is included in the budget figures for the expansion schemes.

### 2.3.S. ACCEPTABLE SYSTEMS - STRUCTURAL (NO WORK REQUIRED)

A visual inspection of the Hall of Justice was conducted. Many of the structural elements were covered by finishings and this hampered the visual inspection. Minor cracks were noted in the walls and slabs. In general, however, the inspection revealed that the walls, columns, slabs and beams are in good condition.

2.3.M. ACCEPTABLE SYSTEMS - :MECHANICAL (NO WORK REQUIRED)

Investigations of the mechanical systems resulted in the identification of nine (9) acceptable systems where no work is required. These systems were inspected and found to be functioning satisfactorily.

#### 2.3.M.1 BOILERS

The three (3) boilers are inspected periodically and found in good condition. The boiler feedwater is well treated. Boilers are expected to operate adequately for a long period of time. Controls of two (2) boilers are, however, to be replaced by automatic control systems. Refer to Electrical item 2.2.E.5.

#### 2.3.M.2 DRINKING WATER SYSTEM

Cooling coils were recently replaced by stainless steel coils. The drinking water system including coils, piping and fountains are in good condition and operate satisfactorily. Health hazards due to pipe insulation asbestos should be, however, taken care of. Refer to Mechanical item 2.1.M.13.

#### 2.3.M.3 HEAT EXCHANGERS

Heat exchangers for high and medium pressure steam and domestic hot water systems are acceptable. Tubes for four (4) hot water converters are, however, to be replaced by stainless steel tubes. Refer to Mechanical item 2.1.M.18.

#### 2.3.M.4 DOMESTIC AND FIRE PROTECTION PUMPS

Domestic and fire protection pumps are in good condition and operate satisfactorily. These pumps are expected to have a long service life.

#### 2.3.M.5 FAN ROOM FANS

Fans of fan rooms are in good condition and operate satisfactorily. Except regular maintenance such as bearing replacement, these fans are expected to have a long service life.

#### 2.3.M.6 RECIRCULATING HOT WATER PUMPS

The two (2) recirculating hot water pumps are in good condition and operate satisfactorily.

#### 2.3.M.7 NEW FAN ROOM ON THE ROOF OF THE CORNER'S BUILDING

This new fan room, built in 1979, is well designed and operates satisfactorily. No work is needed for this fan room, except periodic filter replacement.

2.3.M.8      HEATING, COOLING, DOMESTIC HOT WATER PIPING

Heating, cooling, domestic hot water piping made of copper tubing, is in good condition and expected to have a long service life.

Health hazards due to pipe insulation asbestos should be, however, taken care of. Refer to Mechanical item 2.1.M.13.

2.3.M.9      SEWER

The existing sewer network is in good condition and operates satisfactorily. However, new sewers for the jails should be installed (Mechanical item 2.2.M.6) and the sewage sumps and ejectors should be overhauled (Mechanical item 2.1.M.15).

#### 2.3.E ELECTRICAL SYSTEMS REQUIRING NO WORK

Both the main and the emergency electrical system have sufficient capacity for present and proposed uses for this building contemplated under this study. The telephone system is new and presumably operating properly.



2.3.E.1     TELEPHONE SYSTEM

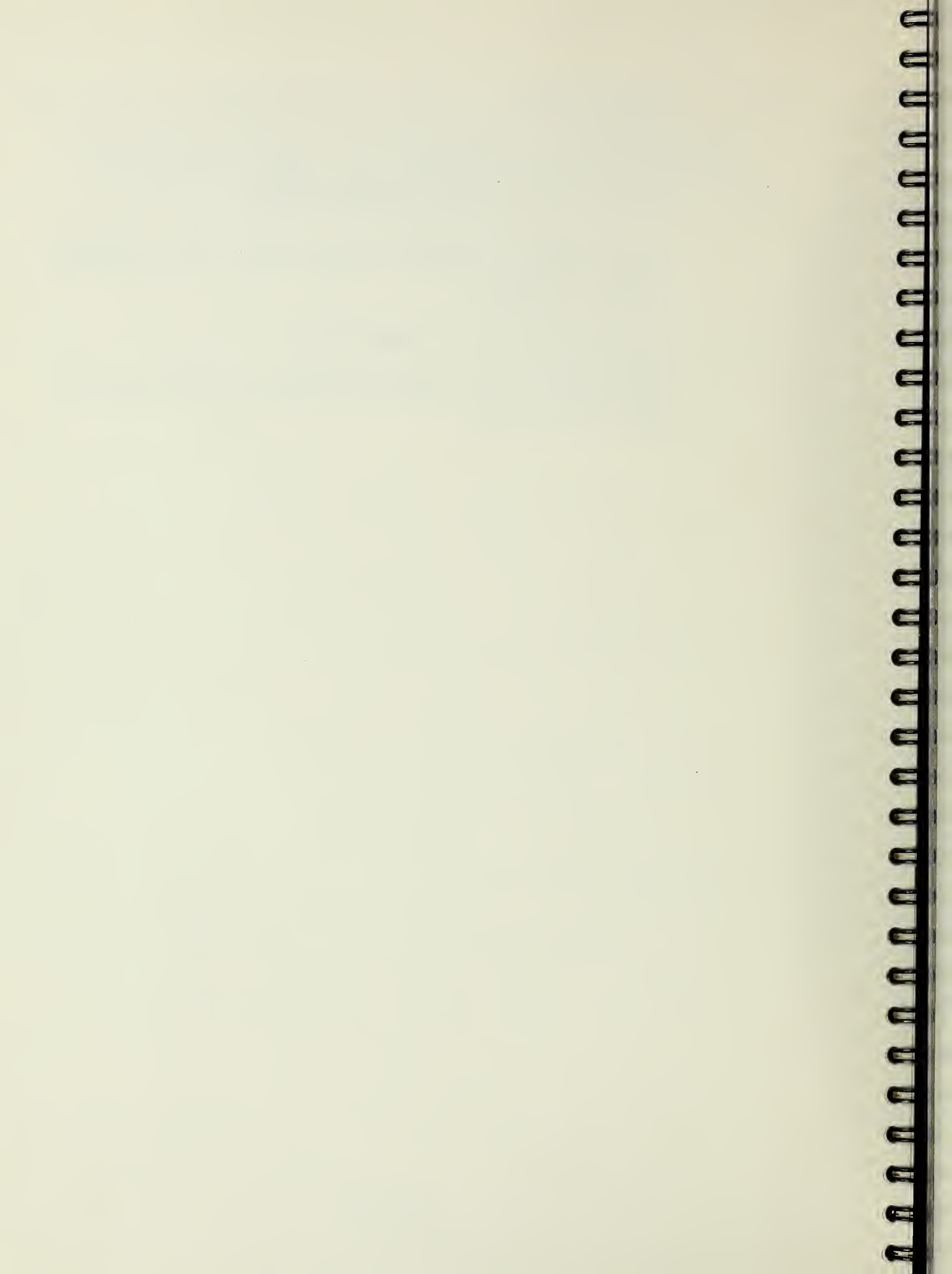
The telephone system has recently been replaced, therefore it would presumably be trouble free for the foreseeable future.

2.3.E.2     CAPACITY OF THE EXISTING ELECTRICAL SYSTEM

Maximum demand data obtained from P.G.&E. shows sufficient capacity exists to provide vertical growth for the existing building as described in the Architectural and Structural condition assessment.

2.3.E.3     CAPACITY OF THE EMERGENCY POWER SYSTEM

The emergency power system is about 85% loaded and has sufficient capacity to add on the additional load needed for item 3.E.8 and 3.E.9.



2. EXISTING FACILITIES

2.4 PROJECT PRIORITY LIST

2.4.1 Life Safety

2.4.2 Critical

2.4.3 Operational Deficiency

PROJECT PRIORITY LIST

The projects are listed under three categories, namely, life safety, critical, and operational deficiency. Within each category, the projects are presented by functional discipline listed by descending order of priority.

2.4.1 LIFE SAFETY ITEMS (Listed in order of priority under each discipline)

Architectural

|         |                               |           |
|---------|-------------------------------|-----------|
| 2.1.A.1 | Delete double deadbolts       | \$ 16,000 |
| 2.1.A.2 | Sallyport at Stair 4          | 47,000    |
| 2.1.A.3 | Change deadbolts to snaplocks | 98,500    |
| 2.2.A.1 | Automatic doors and gates     | 1,328,000 |
| 2.2.A.2 | Jail Intercom system          | 92,000    |
| 2.2.A.3 | Interview area redesign       | 319,000   |

Mechanical

|         |   |         |
|---------|---|---------|
| 2.1.M.1 | Replace sanitary fixtures on the 7th floor  | 307,700 |
| 2.1.M.2 | Install backflow preventers due to health hazards   | 18,800  |
| 2.2.M.1 | Improve life safety against the hazards of fire at the jails.<br>Install smoke removal system | 972,000 |
| 2.2.M.2 | Provide fire sprinklers for critical areas of the jails                                       | 232,000 |
| 2.2.M.3 | Add fire sprinklers in 1st thru 5th floors  | 779,000 |

Electrical

|         |  |              |
|---------|--|--------------|
| 2.1.E.1 | Replace transfer switches for emergency power                          | 44,000       |
| 2.1.E.2 | Replace existing fire alarm equipment in County Jails No. 1 and No. 2  | 21,200       |
| 2.1.E.3 | Extend existing fire alarm system to unprotected areas of the building | 125,000      |
|         |  | <hr/>        |
|         |  | \$ 4,400,200 |

2.4.2 CRITICAL ITEMS (listed in order of priority under each discipline)

Architectural

|         |                                 |    |         |
|---------|---------------------------------|----|---------|
| 2.1.A.4 | Kitchen Floor                   | \$ | 83,000  |
| 2.1.A.5 | Exterior Windows                |    | 97,000  |
| 2.2.A.4 | Mug Room/Medical Office Remodel |    | 174,500 |
| 2.2.A.5 | Loading Dock Improvements       |    | 58,000  |
| 2.1.A.6 | Maintain Existing Doors & Gates |    | 20,000  |

Mechanical

|          |   |  |         |
|----------|---|--|---------|
| 2.1.M.3  | Replace oil recovery systems on two chillers                          |  | 8,500   |
| 2.1.M.4  | Overhaul two emergency power diesel generators                        |  | 63,500  |
| 2.1.M.5  | Replace washers and dryers  |  | 79,600  |
| 2.1.M.6  | Renovate shower units, 6th and 7th floors                             |  | 230,600 |
| 2.2.M.4  | Install toilet privacy screens on 7th floor                           |  | 133,000 |
| 2.1.M.7  | Correct exhaust deficiency at the 7th floor kitchen                   |  | 17,500  |
| 2.1.M.8  | Add heating coils for the women's section, jail #1                    |  | 10,200  |
| 2.2.M.5  | Improve the jails' ventilation system                                 |  | 9,100   |
| 2.2.M.6  | Install a separate sewer system for the jails                         |  | 180,000 |
| 2.1.M.18 | Replace heat exchanger tubes of converters with stainless steel tubes |  | 50,000  |

Electrical

|         |                                       |  |              |
|---------|---------------------------------------|--|--------------|
| 2.1.E.4 | Electrical System Improvements        |  | 179,000      |
| 2.1.E.5 | Replace Distribution Switchboard GDHA |  | 18,000       |
|         |                                       |  | <hr/>        |
|         |                                       |  | \$ 1,411,500 |



2.4.3 OPERATIONAL DEFICIENCY ITEMS (Listed in order of priority under each discipline)

Structural

|       |                                      |          |
|-------|--------------------------------------|----------|
| 1.S.1 | Repair of the Vertical Crack in wall | \$ 1,000 |
|-------|--------------------------------------|----------|

Architectural

|          |                              |         |
|----------|------------------------------|---------|
| 2.2.A.6  | Sheriff's elevator/lobby     | 294,000 |
| 2.1.A.7  | Renovate existing elevators  | 200,000 |
| 2.1.A.8  | Elevator 9 shaft repair      | 19,500  |
| 2.1.A.9  | Window screens and mechanism | 184,000 |
| 2.1.A.10 | Exterior Cladding            | 283,000 |
| 2.1.A.11 | Roof replacement             | 402,000 |

Mechanical

|          |   |         |
|----------|---|---------|
| 2.1.M.9  | Repair/overhaul the cooling tower   | 77,000  |
| 2.1.M.10 | Replace one chiller   | 568,000 |
| 2.1.M.11 | Replace one air compressor of the pneumatic control system                  | 27,000  |
| 2.1.M.12 | Clean HVAC ducts on the 5th, 6th and 7th floors                             | 265,400 |
| 2.2.M.7  | Improve the air filtration system of the building                           | 419,000 |
| 2.1.M.13 | Eliminate health hazards due to asbestos insulation                         | 265,400 |
| 2.1.M.14 | Replace corroded fittings on cold water lines                               | 23,000  |
| 2.2.M.8  | Add four shut-off valves and fix eight leaky valves at domestic water pumps | 12,300  |
| 2.2.M.9  | Install new floor drains at plumbing chases on 1st thru 5th floors          | 22,500  |
| 2.2.M.10 | Install shut-off valves on cold water lines                                 | 22,500  |
| 2.2.M.11 | Repair and extend the pneumatic tubing system                               | 157,000 |

#### 2.4.3 OPERATIONAL DEFICIENCY ITEMS (CONTINUED)

|          |  |         |
|----------|--|---------|
| 2.1.M.15 | Overhaul sewage and rain water sumps and ejectors                  | 31,700  |
| 2.1.M.16 | Replace heating, cooling coils and controls                        | 481,400 |
| 2.1.M.17 | Replace the freezer and two refrigerators in the 7th floor kitchen | 53,000  |
| 2.1.M.19 | Replace two boiler feed pumps                                      | 22,600  |

#### Electrical

|         |  |         |
|---------|--|---------|
| 2.2.E.1 | Coroner's Office - Security  | 38,700  |
| 2.2.E.2 | Replace existing fixtures in various jail areas                                | 160,000 |
| 2.2.E.3 | Replace building alarm system  | 49,000  |
| 2.2.E.4 | Replace existing fixtures in southern police station office and locker room    | 113,000 |
| 2.2.E.5 | Replace controllers in the boilers   | 15,200  |
| 2.2.E.6 | Install control switches in 7th floor laundry room                             | 4,200   |
| 2.2.E.7 | Replace television signal system for jails no. 1 and no. 2                     | 32,500  |
| 2.2.E.8 | Furnish additional emergency lighting and power                                | 43,000  |
| 2.2.E.9 | Furnish additional emergency lighting and power in County Jail No. 1 and No. 2 | 56,500  |

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TOTAL     \$    4,343,400

### 3. EXPANSION ALTERNATIVES STUDY

### 3.A.0 INTRODUCTION

The Hall of Justice is being utilized at or beyond capacity, in terms of physical space, by all of the departments inhabiting the building. The facilities for County Jail #1 and #2 (the existing 6th and 7th floors) appear to be the most severely overcrowded spaces in the building.

This portion of the report will examine and evaluate three distinct Proposals to alleviate the existing overcrowding and allow space for expansion in the future. The Proposals examined are as follows:

- PROPOSAL 1. Construct a vertical expansion of the Coroner's Wing to a height of seven stories.
- PROPOSAL 2. Construct a new seven story building over the existing parking area on the northwest portion of the existing Hall of Justice site.
- PROPOSAL 3. Construct a new seven story building on an adjacent site on the East side of Harriet Street bounded by Ahern, Sixth and Bryant Streets.

Each Proposal will be evaluated for suitability as either an office building or a jail facility. In the context of this report, "office" is used to represent a range of possible uses that would not require the special functions or equipment that a jail facility would require, and should be considered as representing all of the non-jail uses currently inhabiting the Hall of Justice.

For each evaluation of each Proposal the following topics will be addressed:

- A. Area, occupancy loads for office use, inmate load for jail use.
- B. Additional parking provided. There is a critical lack of parking at and around the Hall of Justice at the present time, extending to official vehicles such as police and sheriff's vehicles as well as employees' vehicles.
- C. Code compliance.
- D. Disruption of existing facilities.
- E. Miscellaneous factors.
- F. Cost of proposal.

The zoning regulations for the area in question are currently under review, and are not expected to be finalized until December, 1988. Because of the transitory nature of the facilities being



considered, the maximum practical development of each Proposal has been evaluated even though variances may be required, as described below:

The existing building is 112 feet high, the current height limit is 105 feet; Proposal 1 would require a minor variance, as would Proposals 2 and 3 unless they were scaled down in height..

The site for Proposal 3 is zoned for light industrial used with a 30 foot height limit and a floor area ratio of 2.5. The parcel would have to be re-zoned for use as a public building.

The Proposals for office occupancies and Proposal 1 for jail occupancy do not provide adequate parking by Planning Code Standards. Either variances would have to be obtained, or more floor area would have to be dedicated to parking by adding floors or deleting occupied space.

Proposals 2 and 3 for jail occupancy meet current code requirements and no variances would be required for parking.

The costs in this report are based upon a normal 40 hour work week, Monday through Friday, 8 a.m. to 5 p.m. If ongoing functions at the Hall of Justice require construction to proceed in shifts, at odd hours or under accelerated schedules, the cost figures would have to be evaluated and adjusted accordingly.

### 3.A.1 PROPOSAL 1: ADDITION TO CORONER'S WING

#### 1.0 INTRODUCTION

This proposal would extend the lower portions of the existing building to a height of 7 stories by constructing two floors over the 5th floor Police Administration area, and four floors over the 3 story Coroner's Wing. Please see Figure 1 for location of Proposal 1.

#### 1.1 OFFICE OCCUPANCY OF PROPOSAL 1

Presume relocation of existing 5th floor functions to new addition, expansion of existing jail facilities to existing 5th floor:

- A. Area and occupant loads: The proposal would add approximately 88,000 square feet or about 30% more than the square footage of one existing floor (67,367 sq. ft.) of the main Hall of Justice building, excluding the Coroner's Wing.

Occupant load for an office use of the new addition is estimated at 670 persons.

Occupant load for jail facilities on the 5th floor is estimated at 590 inmates.

B. Parking:

No additional parking would be included as part of this proposal. Due to a 30% increase in office staff, an increase in jail staff, and an increased number of visitors to the expanded jail facility, the parking problem could be expected to increase significantly. A zoning variance would be required.

C. Code Compliance:

The increased occupant load in the Coroner's Wing addition would necessitate the addition of another exit or the widening of some of the existing exits. An additional free-standing exitway could be placed in the existing parking area on the north side of the ramp leading to the lower parking level, and would be preferable to expanding the existing exits. The new addition would have to be fully sprinklered. The existing 5th floor would also have to be fully sprinklered in order for the jail to occupy that space. No additional exit or exit width requirement is anticipated at the existing 5th floor.

D. Disruption of existing facilities:

The relocation process would certainly disrupt the normal functions of the department being relocated.

The construction over existing space occupied by the Municipal and Superior Courts would be disruptive to the Courts below, and the 5th floor remodel would be disruptive to the 4th floor Police departments below.

The location of the project would probably cause significant disruption of auto traffic around the facility.

The Police Department functions currently on the 5th floor are organized in a horizontal fashion. After relocation, they would be organized in a vertical fashion on four levels. The vertical configuration will be slightly less efficient than the existing horizontal one.

E. Miscellaneous factors:

As a result of this scheme, the jail would share a vertical separation barrier with some Police Department functions on the 5th thru 7th floors. It would be up to the Sheriff's Department to determine if there are any security implications arising from this condition.



F. Cost:

|                           |              |
|---------------------------|--------------|
| Design                    | 1,348,000    |
| Construction              | 17,968,000   |
| Demolition and Remodeling | 10,510,000   |
| Inspection                | 674,000      |
| <hr/>                     |              |
| TOTAL                     | \$30,500,000 |

1.2 JAIL OCCUPANCY OF PROPOSAL 1

A. Area and Occupant Loads:

The proposal would add approximately 88,000 square feet, an increase of 65% over existing jail facility. It is estimated that 760 inmates could be housed in this area.

B. Parking:

No additional parking would be included as part of this project. There would be an increase in jail staff and visitors to the facility, compounding the existing parking shortage. The effect would not be as great as it would be if the addition were occupied by office space. A zoning variance would be required.

C. Code Compliance:

The increased occupant load would require widening of existing exits or the addition of a new exit. Please refer to the code compliance discussion under item 1.1, Office Occupancy.

D. Disruption of existing facilities:

The effect of this proposal would be limited to the Courts on the 4th floor and the disruption of vehicular traffic at ground level due to construction activities.

E. Miscellaneous Factors:

The jail would share a vertical separation with Police Department functions on the 4th and 5th floors.

F. Cost:

|              |              |
|--------------|--------------|
| Design       | 1,905,000    |
| Construction | 25,393,000   |
| Inspection   | 952,000      |
| <hr/>        |              |
| TOTAL        | \$28,250,000 |

### 3.A.2 PROPOSAL 2: NEW BUILDING OVER PARKING GARAGE

#### 2.0 INTRODUCTION

This proposal incorporates a new seven story building over the existing two level parking garage. The existing parking garage would be demolished and replaced, with a third level of parking added on the second floor of the new building.

The five remaining stories will be utilized for office or jail facilities. Please see Figure 2 for location of Proposal 2.

#### 2.1 OFFICE OCCUPANCY OF PROPOSAL 2

Presume that existing functions located on the 4th and 5th floors will be relocated into the new structure, with the jail moving into those vacated areas, and the remainder of the new building occupied as deemed appropriate by the various departments at the Hall of Justice.

##### A. Area and Occupant load:

The area of the proposed building would be approximately 31,680 square feet per floor on five floors of offices for a total of 158,400 square feet, and one floor of additional parking at 31,680 square feet. The office occupant load is estimated at 1,220.

The ratio of the proposed floor area to the floor area of the existing facility is 2.13:1. The vacating of existing floors 4 and 5 will occupy 4.26 floors in the new building, leaving .74 floors, or 23,760 square feet for future office expansion, with a projected future occupant load increase of 183.

##### B. Parking:

There would be an increase in parking demand due to increased jail staff and a larger number of visitors to the expanded jail facility. There would also be increased demand from the occupant load increase of 183 persons projected for the new building.

It is estimated that 70 new parking spaces would be added by the third parking level which would alleviate, to some degree, parking for official vehicles. A zoning variance would be required unless two more floors were dedicated to parking.

No parking would be provided for the increased demand by employees and visitors, worsening the already severe shortage of parking in the area.

C. Code Compliance:

New structure would comply with all current codes.

D. Disruption of existing facilities:

The new structure would be built within the courtyard formed by the existing building and as a consequence, would likely have a substantial impact, in terms of noise and dirt, during the construction process.

The project would also close the parking facilities completely during the construction process. The cost of substitute parking facilities is not included in the cost figures for this proposal.

The departments currently occupying the 4th and 5th floors would certainly be disrupted for some period of time by the relocation, and the 3rd and 6th floors would be disrupted for the duration of the remodeling process.

E. Comments:

This addition would have a great impact on the perimeter offices that now face the courtyard as there would be light wells created between the new and existing buildings. Architecturally, this could be mitigated by stepping back the facade on the upper floors facing the existing facility, but square footage would be sacrificed.

The new building would give planners the opportunity to expand or possibly replace the existing loading dock area, thereby solving some of the problems in that area. Please refer to Item 2A.5 of this report for a discussion of the dock area.

F. Cost:

|                           |              |
|---------------------------|--------------|
| Design                    | 2,100,000    |
| Construction              | 25,480,000   |
| Demolition and Remodeling | 19,049,000   |
| Inspection                | 638,000      |
| <hr/>                     |              |
| TOTAL                     | \$47,267,000 |

2.2 JAIL OCCUPANCY OF PROPOSAL 2:

Presume the fail would occupy all five available floors with bridge connection(s) to the existing jail facilities.



A. Area and Occupant Load:

Five floors would total 158,400 sq. ft. with an anticipated inmate capacity of 1,485.

B. Parking:

There would be increased parking demand due to staff increases and larger numbers of visitors to expanded facilities. The increase would not be as large as it would be under the office occupancy, as the jail staff increase would not equal the increased office occupancy. No variance would be required.

C. Code Compliance:

New structure will meet all code requirements.

D. Disruption of Existing Facilities:

The jail facility would have the same effect as the office facility would in terms of noise, dirt and disruption of existing parking.

As there would be no relocation of existing departments, and no remodeling of existing spaces, the disruption of existing spaces would be limited to the tie-in(s) of any bridges between the new and existing facilities, and would be limited to the jail facilities.

E. Comments:

The comments for office occupancy of this Proposal apply to the jail occupancy also.

In addition, there are security implications in having prisoners housed in a second floor facility where access to grade would be much easier than access from higher levels.

F. Costs:

|              |                     |
|--------------|---------------------|
| Design       | 2,904,000           |
| Construction | 38,720,000          |
| Inspection   | 1,452,000           |
| <u>TOTAL</u> | <u>\$43,076,000</u> |

3.A.3 PROPOSAL 3: NEW BUILDING ON ADJACENT PROPERTY.

3.0 INTRODUCTION:

This proposal consists of a new seven story building to the east of Harriet Street and would require the demolition of

the existing buildings on the site. Temporary housing for the functions contained in these buildings is not included in the costs for this proposal. Assume two floors of parking, 1 below grade and one at grade, with 6 occupied floors above. Please see Figure 3 for location of Proposal 3.

### 3.1 OFFICE OCCUPANCY OF PROPOSAL 3

#### A. Area and Occupant Load:

The area of the new building would be 40,300 square feet per floor, with a total of 241,800 square feet on 6 occupied floors. The relocation of the existing 4th and 5th floors would require 3.34 floors in the new building, the existing functions housed on the site would occupy another floor, leaving 1.66 floors for future expansion. The total occupant load of the new structure is estimated at 1,934 of which 537 occupants would be a result of the future expansion.

#### B. Parking:

Two floors of the building dedicated to parking would accommodate 180 vehicles, which may be adequate to accommodate additional official vehicles. The demand for street space and employee parking would be increased. A zoning variance would be required unless another floor were dedicated to parking.

#### C. Code Compliance:

New structure would comply with all current codes.

#### D. Disruption of Existing Facilities:

Due to separation between the existing and new facilities, this proposal would have a smaller impact on existing functions, in terms of noise and dirt, than the other two proposals. The existing 4th and 5th floors would be relocated into the new building and would therefore be disrupted during that process; the remodeling of the 4th and 5th floors into correctional facilities would be disruptive to the 3rd and 6th floors. In addition, the department(s) currently located in the single story structure would be disrupted twice; once by vacating the space, and again when moving back into the new building.

#### E. Comments:

The opportunity would exist for a new loading dock area to expand or replace the existing loading dock.

This site would provide the "cleanest" project, in that the new building would not be interfacing with an existing structure.

F. Cost:

|                         |              |
|-------------------------|--------------|
| Design                  | 3,903,000    |
| Construction            | 33,661,000   |
| Demolition & Remodeling | 18,378,000   |
| Inspection              | 1,951,000    |
| <hr/>                   |              |
| TOTAL                   | \$57,893,000 |

3.2 JAIL OCCUPANCY OF PROPOSAL 3:

A. Area and Occupant Load:

The area is 40,300 square feet per floor with a total of 241,800 square feet on 6 occupied floors. The total inmate population of this structure is estimated to be 2,267.

B. Parking:

Parking capacity is estimated at 180 vehicles on two lower floors. Official parking for the facility should not utilize all the parking, so there may be space available for some overflow from the overcrowded Hall of Justice parking lot. Demand for street parking would increase due to increased visitors and larger numbers of employees, but would not be as great as would occur if the new building were office space. No variance would be required.

C. Code Compliance:

The new structure would comply with all current codes.

D. Disruption of Existing Facilities:

The jail occupancy of this site would be the least disruptive of all expansion Proposals. As there would be no relocation of any existing Hall of Justice functions, business could proceed as usual.

The noise and dirt impact would be minimized because of the detached site, with the major disruption occurring in the department currently occupying the existing building slated for demolition.



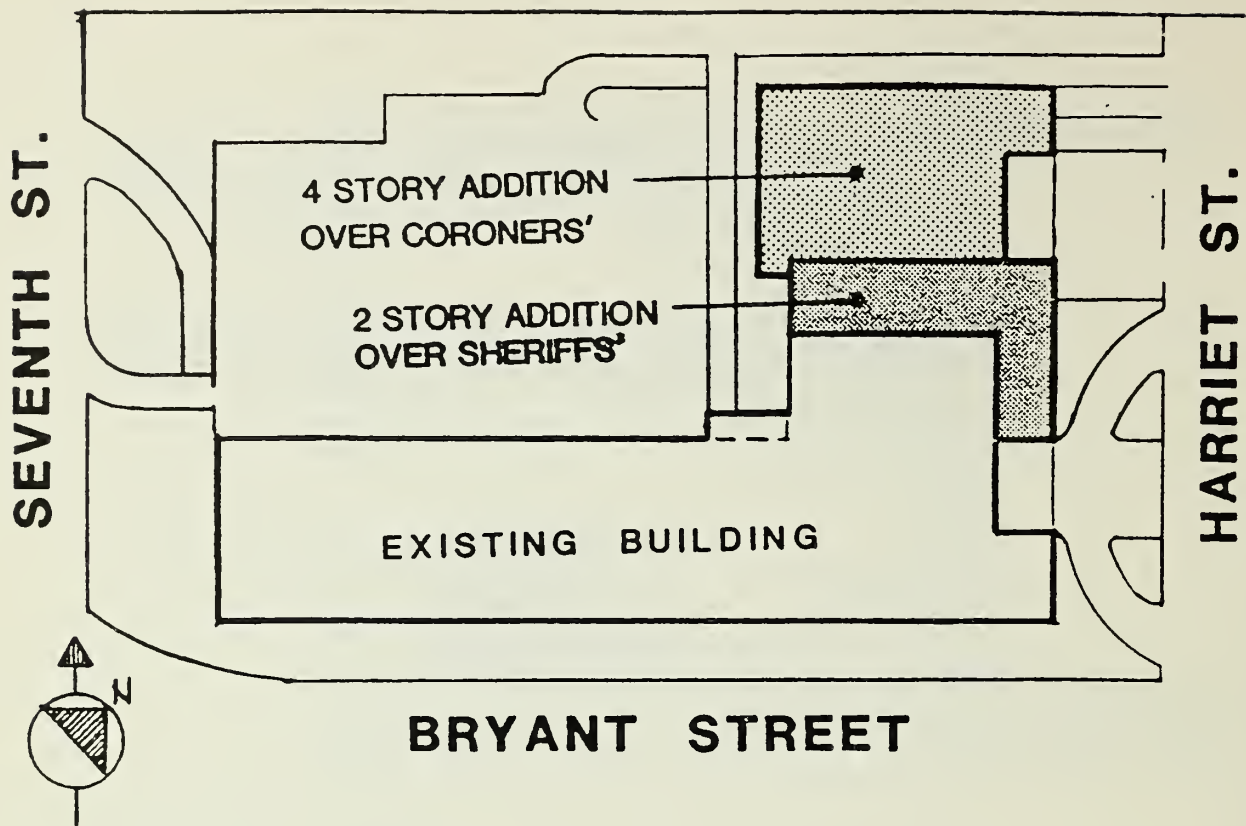
E. Comments:

This proposal would present an opportunity to redesign the loading dock functions of the existing facility, possibly incorporating a central loading dock area for both structures.

The new jail facilities would presumably be connected on at lease one level by a pedestrian bridge. An allowance for such a bridge has been included in the cost figures below.

F. Cost:

|              |                    |
|--------------|--------------------|
| Design       | 3,979,000          |
| Construction | 53,053,000         |
| Inspection   | 1,989,000          |
| <hr/> TOTAL  | <hr/> \$59,021,000 |



## PROPOSAL NUMBER 1

ADDITION TO CORONERS/SHERIFFS WING

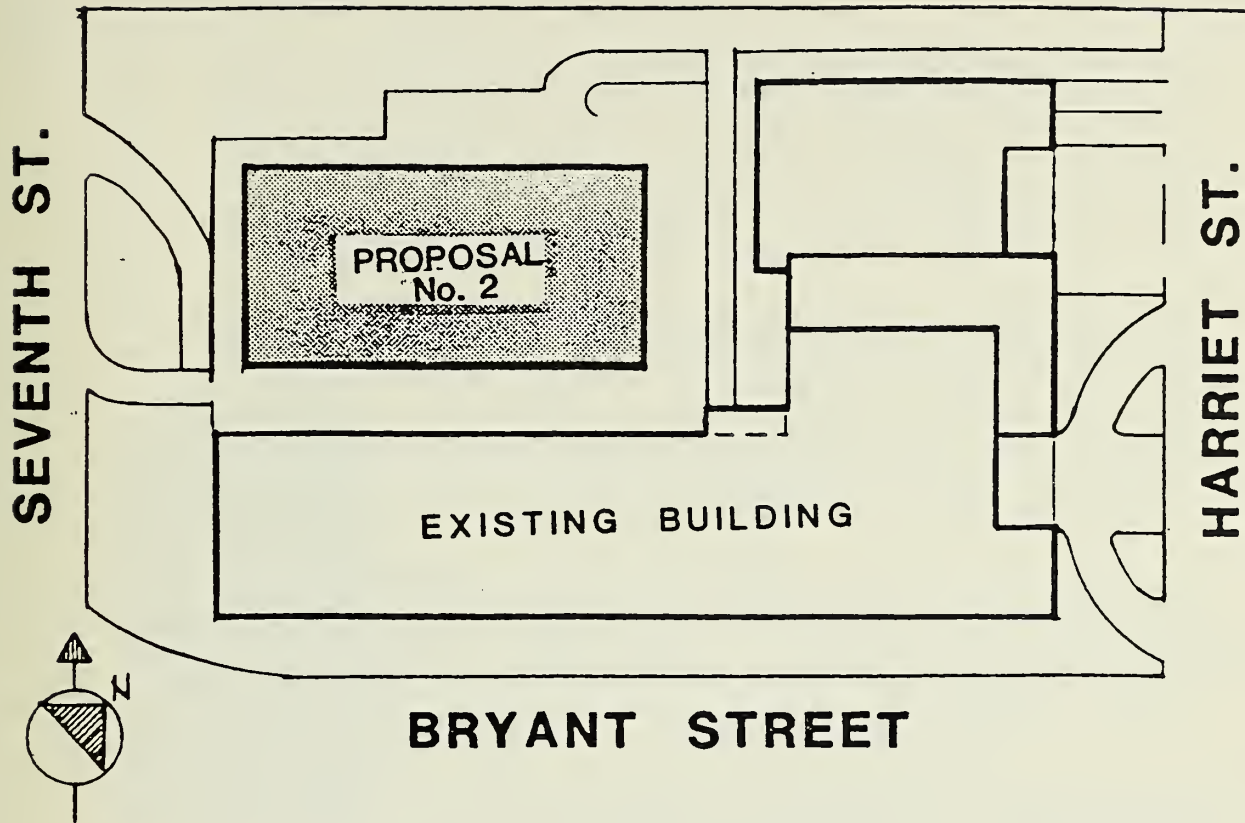
FLOOR AREA : 4 STORIES AT 36,000 SQ. FT.

2 STORIES AT 8,000 SQ. FT.

TOTAL FLOOR AREA : 88,000 SQ. FT.

NO ADDITIONAL PARKING

FIGURE 1



## PROPOSAL NUMBER 2

ADDITION OVER GARAGE

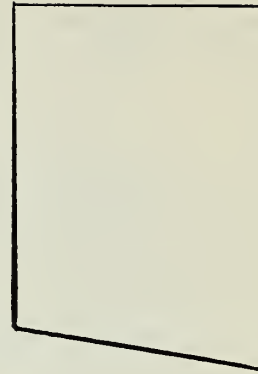
FLOOR AREA : 31,680 SQ. FT.

5 FLOORS : 158,400 SQ. FT.

ADDITIONAL PARKING : 70 SPACES

FIGURE 2

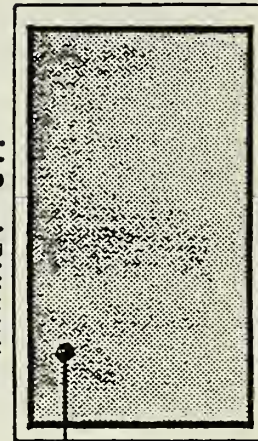
HARRISON ST.



AHERN WAY

HARRIET ST.

SIXTH ST.



EXISTING BUILDING

BRYANT STREET

PROPOSAL No. 3

## PROPOSAL NUMBER 3

NEW BUILDING ON ADJACENT PROPERTY

FLOOR AREA : 48,360 SQ. FT.

5 FLOORS : 241,800 SQ. FT.

ADDITIONAL PARKING : 180 SPACES

FIGURE 3



#### 3.A.4 CONCLUSION:

It was decided early in this study to study the costs, and other implications, of two different occupancies for each of the expansion alternatives. It was postulated that an office structure could be built more economically than a correctional facility and that the existing heavy-duty structure of the H.O.J. would be better suited for jail occupancy than a new structure would be.

However, the office concept requires relocating office space currently occupying the 4th and/or 5th floors, gutting those floors, and remodeling them for use as jail space. When the associated costs of this related work are tallied, the cost of the office option exceeds the cost of the jail in two of the three proposals. If one examines the cost per inmate housed, the jail options are less for all three proposals.

The cost figures used for the jail occupancy reflect, in part, the requirement for more massive construction for security purposes. Although the existing H.O.J. is, by all accounts, an exemplary example of heavy construction, a new correctional facility would certainly be adequate from a security standpoint.

As there is a parking problem in the area for both official vehicles trying to park in the H.O.J. lot, and employees' and visitors' autos, additional parking provided by the expansion options is a factor to be considered. Proposal 1 provides no new parking. Proposal 2 provides some new parking and Proposal 3 provides a significant amount of new parking.

The degree of disruption to existing facilities is a major factor that must be considered, given the critical functions of the Police Department and courts. Proposal 1 is the most disruptive, as construction would be performed in and on the existing structure, Proposal 2 is moderately disruptive, as it is in close proximity to the existing building and would require parking to be relocated during the construction period, and Proposal 3 is the least disruptive of the schemes as it is furthest away from the existing building, requires temporary relocation only of the ancillary functions housed in the existing low rise facility and would not interfere greatly with existing parking.

The willingness of existing functions on the 4th and/or 5th floor to be relocated to a new location is a factor that must be taken into account when evaluating these Proposals.

It is not the intent of this report to cover all the possibilities for the alternatives examined, but to present the range of costs at points in the spectrum. The most appropriate design solution, for example, may combine more parking area with a multi-use facility similar to the

existing H.O.J., in contrast to the single-use facilities that have been evaluated here. The cost for multi-use facilities may be interpolated between the Proposals estimated in the report.



### 3.A.5. RECOMMENDATION

Proposal 3, a new building on the adjacent site, best satisfies all the requirements for the expansion of the Sheriff's Department.

Although it requires the largest capital outlay, it also provides the most square footage and the largest inmate population, giving it the second lowest cost/square foot and, but a significant margin, the lowest cost/inmate. The building space would be new and, therefore, would be designed to meet the very specific program requirements as set up by the Sheriff's Department.

As it is removed from the existing H.O.J. site, the disruption of ongoing functions in the existing building would be the least of any Proposal studied: temporary parking would not be required, the fewest number of offices would be impacted and the impact would be the least, and no lightwells would be created. Yet the new and existing facilities would still be close enough to allow bridges at chosen levels to facilitate horizontal circulation.

In addition, the larger area provided by Proposal 3 would increase the available options for the Sheriff's Department. It could represent a longer term solution to the Department's space requirements, it could provide expansion for related departments, or it could provide enough parking to relieve the chronic shortage in the area.

In summary, Proposal 3 would represent the best investment for the money, if the funds are available.

SUMMARY OF EXPANSION ALTERNATIVES

| PROPOSAL          | SQ. FOOTAGE | COST<br>IN<br>MILLIONS | COST<br>SQ. FOOT | INMATE<br>LOAD<br>ADDED | COST/<br>INMATE | ADDITIONAL<br>PARKING<br>ADDED | DEGREE<br>OF<br>DISRUPTION |
|-------------------|-------------|------------------------|------------------|-------------------------|-----------------|--------------------------------|----------------------------|
| <u>Proposal 1</u> |             |                        |                  |                         |                 |                                |                            |
| 1.1 Office        | 88,000      | 30.5                   | 346.59           | 590                     | 51,695          | 0                              | Severe                     |
| 1.2 Jail          | 88,000      | 28.25                  | 321.03           | 770                     | 36,688          | 0                              | Substantial                |
| <u>Proposal 2</u> |             |                        |                  |                         |                 |                                |                            |
| 2.1 Office        | 158,400     | 47.27                  | 298.40           | 1,180                   | 40,057          | 70                             | Substantial                |
| 2.2 Jail          | 158,400     | 43.08                  | 271.94           | 1,485                   | 29,007          | 70                             | Moderate                   |
| <u>Proposal 3</u> |             |                        |                  |                         |                 |                                |                            |
| 3.1 Office        | 341,800     | 57.89                  | 239.41           | 1,180                   | 49,059          | 180                            | Moderate                   |
| 3.2 Jail          | 241,800     | 59.02                  | 244.09           | 2,267                   | 26,035          | 180                            | Light                      |

Note: The costs include all construction, demolition, remodeling, parking facilities, contingencies, design and construction management fees.

APPENDIX I



HALL OF JUSTICE  
INFORMATION ON STRUCTURE

ORIGINAL CONSTRUCTION

DESIGNERS: Hall, Pregnoff and Matheu  
Structural Engineers  
(now Pregnoff and Mathew: 321-0832)  
299 California Ave., Palo Alto

ARCHITECTS: Weihe, Frick & Kruse  
Architects

DATE: September 11th, 1958

INFORMATION AVAILABLE: Plans (Structural & Architectural)

EXTENSION OF THE CORONER'S OFFICE

DESIGNERS: Donald Bentley & Associates  
Nishkian, Hamill & Associates

ARCHITECTS: John Carl Warnecke & Associates

DATE: March 16th, 1979

INFORMATION AVAILABLE: Plans (Structural)

ROOFTOP EXTENSION (GYMNASIUM)

DESIGNER: Shapiro, Okino, Hom & Associates

ARCHITECTS: Bureau of Architecture

DATE: November 13th, 1985

INFORMATION AVAILABLE: Plans (Structural & Architectural)





#### 4. CONCLUSIONS AND RECOMMENDATIONS

## CONCLUSIONS AND RECOMMENDATIONS

The Hall of Justice is architecturally and structurally sound, needing little or no improvements. Many of its existing facilities, however, are in need of improvement, repair or replacement, some urgently, some preferably. Depending on the amount of funding, they may be done under one contract, or in phases in order of priorities.

With respect to expansion, of the three proposals, we recommend Proposal 3, constructing a new building on the adjacent site. This proposal, although requiring the largest capital outlay, will in the long run meet all the specific program requirements being considered by the Sheriff's Department. It will allow the highest projected growth of the prison population. On a cost per square foot basis, it is the second lowest of the three proposals. On a cost per inmate basis, it is the lowest by a considerable margin.

In conclusion, notwithstanding our recommendations, the final choice of action will largely be determined by finances and the will of the legislative body.

## ACKNOWLEDGEMENT

This Condition Assessment was prepared by the following staff of the Bureau of Architecture, and the General Engineering Services Division of the Bureau of Engineering:

|                    |   |
|--------------------|---|
| Russ Abel          | Architect                                 |
| Robert Appleton    | Architect                                 |
| Michael Lane       | Jr. Civil Engineer                        |
| Daniel Hom         | Structural Engineer                       |
| Daniel Lee         | Electrical Engineer                       |
| James Dollard      | Sr. Electrical Engineer                   |
| Thinh D. Nguyen    | Associate Mechanical Engineer             |
| Ted Wisnia         | Sr. Mechanical Engineer                   |
| Armando Villanueva | Mechanical Engineering Associate          |
| Raymond Wong       | Principal Engineer and<br>Project Manager |
| Walter Loo         | Illustrator and Art Designer              |





